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## Abstract

As the sole issuer of bank notes, the Bank of Canada conducts methods-of-payment (MOP) surveys to obtain a detailed and representative snapshot of Canadian payment choices, with a focus on cash usage. Overall, cash usage at the point of sale has decreased since 2009, constituting 44 per cent of payment volume and 23 per cent in terms of value, and the median value of a cash transaction is about $9. Respondents' perceptions and demographic factors are used to interpret survey data: cash is seen as a convenient, low-cost, secure and widely accepted form of payment, and is used most widely among respondents who are age 55 and above, have an income less than $45,000 or have only a high school education. The paper also provides a comprehensive view of payment innovations, such as stored-value cards, contactless credit/debit cards or mobile payments, which are often perceived as substitutes for cash.



*JEL classification: E4*
*Bank classification: Bank notes; E-money*



## Résumé

En tant qu'unique autorité habilitée à émettre des billets de banque au pays, la Banque du Canada réalise des enquêtes sur les modes de paiement. Celles-ci lui fournissent un aperçu détaillé et représentatif des choix de méthodes de paiement des Canadiens, en mettant l'accent sur l'utilisation de l'argent comptant. Dans l'ensemble, le règlement de transactions aux points de vente avec de l'argent liquide, en diminution depuis 2009, représente 44 % du volume des paiements et 23 % de la valeur totale des transactions. La valeur médiane des transactions réglées comptant s'établit à environ 9 $. Les données de l'enquête sont interprétées à la lumière des perceptions des répondants et de facteurs démographiques, et permettent de conclure que l'argent liquide est considéré comme un mode de paiement commode, peu coûteux, sûr et largement accepté; son utilisation est plus répandue chez les répondants âgés de 55 ans ou plus, dont le revenu est inférieur à 45 000 $ et dont le plus haut niveau de scolarité est un diplôme d'études secondaires. L'étude donne également un portrait complet des innovations en matière de paiement – notamment les cartes prépayées, les cartes de crédit et de débit sans contact et les paiements mobiles –, qui sont souvent perçues comme des substituts de l'argent comptant.



*Classification JEL : E4*
*Classification de la Banque : Billets de banque, Monnaie électronique*

# 1 Introduction

As the sole issuer of bank notes, the Bank of Canada is interested in the evolution of Canadians' use of cash and how it compares with other payment methods. Cash usage is difficult to measure, since cash is an anonymous payment method, but is nevertheless important to track for both research and policy reasons. Therefore, the 2013 Methods-of-Payment (MOP) Survey was undertaken by the Currency Department of the Bank to provide a complete picture of both cash and non-cash payments. It focuses on the following components: (1) the types of payment instruments Canadians are adopting and using, especially innovations that could potentially replace cash, such as stored-value cards, contactless credit/debit cards or mobile payments; (2) a detailed picture of how consumers manage their cash with respect to withdrawals, cash holdings and other uses of cash beyond typical retail purchases; (3) payment patterns in terms of demographics and point-of-sale characteristics; and (4) consumers' perceptions of the various payment instruments.

The 2013 MOP Survey is designed with these objectives in mind and consists of two parts: a survey questionnaire (SQ) that collects information on the respondent's payment methods and their characteristics, and a diary survey instrument (DSI) that records all cash and non-cash payments over a three-day period. In addition, the DSI collects information on cash withdrawals (dollar amount, reason and venue) and other cash transactions (being paid in cash, cashing a cheque, etc). The 2013 MOP is a follow-up to, and retains most of the core features of, the 2009 MOP Survey (see Arango and Welte (2012)). The 2009 MOP was an innovation in survey design, since it introduced a three-day diary format, intended to serve as a memory aid to record cash payments and thus minimize recall bias. The diary methodology has been successfully used in six other countries: Austria, Australia, France, Germany, the Netherlands and the United States; more details are available in Bagnall et al. (2014).

We begin with an overview of the key insights from the 2013 MOP Survey:

1. The average Canadian reports holding about $84 in his/her wallet. Besides cash, 98% have a debit card, while about 82% have a credit card. Canadians have on average three cards: one debit and two credit cards. Increasingly, they report having the contactless feature on their debit card (about 21%) and credit card (46%).

2. Cash accounts for about 44% of the volume share and 23% of the value share of payments. Cash is used mostly for small-value transactions, with the median cash transaction at about $9. Compared with 2009 levels, cash payments have decreased by 10 percentage points in terms of volume and increased by 0.4 percentage points in terms of value. Debit volume has decreased by 4 percentage points, while credit card volume has increased by 12 percentage points. Contactless credit card payments account for about 19.3% of the volume of credit card payments (in 2009 it was 5%).

3. Among demographic groups, cash is used mostly by respondents who are older (age 55 and above), have lower incomes (less than $45K) or have only a high school education. However, groups that report low cash usage hold similar amounts of cash as those who favour paying with cash.

4. The top stated reasons for cash usage are that it is a low-cost, secure, easy to use and widely accepted form of payment relative to debit and credit cards. Cash is used

most often to pay for travel/parking (57% of all travel/parking payments) and entertainment/meals (56% of all entertainment/meals payments). It constitutes a majority of person-to-person payments.

The rest of this paper proceeds as follows. Section 2 discusses what is in consumers' wallets, while Section 3 considers how consumers pay. These patterns are viewed from the lens of several demographic factors such as region, age, income, gender, urban/rural location, education and home ownership. Section 4 then reviews consumers' assessments and perceptions of payment methods. Finally, Section 5 concludes. Appendices A to D describe the survey design and methodology. Appendix E presents definitions of terms and variables.

# 2 What's in Your Wallet?

We now turn to the type of payment instruments that respondents have in their possession. These responses are tabulated from the SQ (What's in Your Wallet, Main Bank Account, Main Credit Card, and Cash sections). We summarize by subsection each payment method as well as bank and credit card features. For each table, we compute the statistic first for the whole sample, then by region, age, income, gender, urban/rural area, education and home-ownership status.

## 2.1 Cash, debit and credit cards

Respondents report having on average $84 in cash holdings on hand, that is, in their wallet, purse or pockets (Table 1). The survey also asks respondents how much cash is held in other places such as their home and/or vehicles. Because of the wide range in estimates, we report a median amount of $300 cash. Approximately 11% report that they receive cash from their employer or business in a typical month, and about 16% from their friends or family members. Respondents aged 55 years and older hold the highest mean amount of cash on hand, at $119; those aged 18-34 carry the lowest, at $61, yet are the most likely to receive cash from an employer. Those in the Atlantic region report high cash holdings on hand ($93) and in places such as their home ($350). They are also more apt to be paid in cash, at 13%, while British Columbia respondents have high incidences of receiving cash from family and friends, at about 18%.

Table 2 shows the proportion of respondents who reported having different denominations of coins and notes on hand at the beginning of the diary. These proportions are for respondents who reported having a positive amount of cash in total. Overall, the $5, $10 and $20 denominations are most popular, with 75.5% of respondents holding fives or tens and 71.3% holding twenties. Among respondents who have cash on hand, those who live in the Atlantic region, who are above 55 years of age or who are from rural areas, are more likely to hold high-value denominations (hundreds and fifties). Respondents from the Prairies, those above 55 years of age, and those with high incomes are more likely to hold twenties. Respondents below 34 years of age and female respondents are more likely to hold low-value denominations (coins).

Table 3 illustrates cash withdrawals. Respondents withdraw on average $118 per trip to the automated banking machine (ABM) and make about three ABM withdrawals per month.

They also report fewer than one withdrawal per month at a bank teller and via cashback on their debit cards. Withdrawals made at a bank teller are typically larger in value, at $236, twice the value of an ABM withdrawal, while cashback transactions tend to be small in value ($43). Quebec respondents withdraw larger amounts compared with other regions at both the ABM ($136) and the bank ($297). Renters tend to make more frequent cash withdrawals via every source.

Measures of ownership for debit and credit cards are reported in Table 4. Debit card ownership is nearly universal at about 98% and consistently high across all demographic categories considered. Canadians hold about 1.1 debit cards on average. Notably, those who are older, with lower incomes, or who are less-educated have a lower proportion or number of debit cards. The level of credit card ownership in Canada is about 82% and respondents report having on average two credit cards. Low levels of credit card ownership correspond with higher cash usage and lower income. The lowest rate of credit card ownership is among (1) 18-34 year-olds with 74.1% and 1.4 cards; (2) those earning less than $45K in income with 71.2% and 1.5 cards; (3) those with only high school education with 72.6% and 1.6 cards; and (4) those who rent or live for free, at less than 70% and 1.2 or fewer cards on average. In contrast, respondents with higher incomes tend to have both higher rates of credit card ownership and lower cash usage. Almost 90% of respondents in the highest income category owned credit cards, and they are less likely to receive cash from employers or family/friends than any other income category.

## 2.2 Main bank account and credit card features

To understand debit and credit card ownership, we provide information on respondents' main bank account, main credit card features and main credit card spending in Tables 5-7.

### 2.2.1 Main bank account

Table 5 shows the features of respondents' main bank accounts. Overall, half of all Canadians have had their main bank account for 15 years or longer, and the average current balance is about $3,400. Paying account fees is fairly common, with 44% of Canadians paying a fee to maintain their account in the past month and over one third paying a fee to make a transaction.

The table suggests that Prairies residents keep the highest bank account balances, with a mean of $4,374. Quebec has a high proportion of residents who pay account fees and transaction fees, have the lowest mean balance, and the highest median number of years owning the account. Quebec residents also have a much lower proportion of bank cards with the contactless feature than the other regions, at only 9.6%. As age, income or education increases, the likelihood of paying transaction fees decreases. Renters are more likely to pay account and transaction fees than homeowners or those who live for free.

### 2.2.2 Main credit card

Table 6 contains statistics regarding features of respondents' main credit cards. Respondents reported using Visa, MasterCard, American Express, retail store credit and gas station credit cards as their main cards. Overall, of those who own a credit card, 12% have interest

rates below 5%. About 21% of Canadians pay an annual fee on their main credit cards, though 73% of them also have some form of rewards program, which may help offset this cost. Indeed, among high-income/high-education respondents, a higher prevalence of fees is associated with an increased prevalence of rewards.

The British Columbia region, with a relatively high prevalence of annual fees at 23%, also has the highest proportion of credit cards with rewards programs, at 78%. While the Atlantic region has the highest prevalence of annual fees at 25%, it has the lowest proportion of respondents with rewards programs. Quebec has the highest proportion of respondents with low interest rates.

As age increases, respondents are more likely to have a rewards program on their credit card. In contrast, people in the middle age category are least likely to have interest rates below 5%, and they also pay high average annual fees.

The proportion of cards with annual fees and the proportion of cards with rewards both increase with respondents' income and education levels. These variables are also higher for males than for females, and for urban residents than for rural. Meanwhile, the proportion of people with low interest rates decreases as income and education levels increase. With respect to home ownership, those who own their homes are more likely both to pay annual fees and to receive rewards. Renters are most likely to have an interest rate below 5%.

Table 7 shows that many respondents have high spending limits on their credit cards, with 40% enjoying a spending limit above $10,000. However, 17% have spending limits under $2,000. Overall, respondents report the mean and median amounts charged the previous month to be $1,169 and $608, respectively. The demographic categories with a higher prevalence of rewards also report higher spending in the previous month. Most respondents paid off the full balance; however, 28% may be considered *revolvers*, i.e., they did not pay off the full balance and would have been charged interest.

Regionally, Quebec residents have the lowest spending limits, with 24% having limits below $2,000 and only 25% with limits above $10,000. In British Columbia, the province with the highest spending limits, 15% of respondents report limits below $2,000 and 46% limits above $10,000. Not surprisingly, Quebec and British Columbia also have the lowest and highest amounts charged to credit cards, respectively. The Atlantic region has the highest proportion of revolvers, at 39%.

Spending limits are correlated in an expected way with age, income and education: older, higher-income and more-educated respondents have access to more credit. These groups are also more likely to have a high interest rate on their main credit card, but are less likely to actually pay interest, since the proportion of revolvers is lower. Revolving is most likely for renters, at 43%. A noticeable difference in actual spending is also associated with home ownership. Respondents who own a home spend $1,279 on average, almost twice that of renters.

## 2.3 Payment innovations

Table 8 shows patterns of ownership for the contactless feature of a debit card, the contactless feature of a credit card, stored-value cards issued by Visa, MasterCard or American Express (multi-purpose), and store-branded stored-value cards (single-purpose). About 21% of respondents report having a contactless feature on their main debit cards. Respondents in the Atlantic region, younger people, males, high-income earners or people who live for free

are more likely to have this contactless feature. However, Table 9, which shows use in the past year of alternative methods of payment, reveals that having the feature is different from using it. Although more than one-fifth of respondents have this feature, only 9% report having made a contactless debit payment in the past year. Furthermore, almost half of respondents' main credit cards (46%) have a contactless feature embedded, and 33% of respondents actually used it to make a payment in the past year. As with debit cards, penetration of the contactless feature on credit cards is relatively low in Quebec (35%) and high in Ontario (55%) compared with the other regions of Canada. Penetration of the credit card contactless feature increases with income and education level, but decreases with age.

Table 8 also shows that one-quarter of Canadians have at least one single-purpose card, which is more than twice the ownership rate of multi-purpose cards, at 11%. Among card owners, respondents also have slightly more single-purpose cards (2.0) than multi-purpose (1.4). In addition to contactless use, Table 9 shows usage of stored-value cards and other payment innovations. The use of single-purpose stored-value cards (SVCs), at 38%, is higher than that of multi-purpose stored-value cards (SVCm), at 23%. Mobile payment applications remained at a low level of adoption in 2013, with only 7% of Canadians having made such a payment. A relatively large proportion of respondents have made online payments, with 41% for online credit card payments, followed by 31% for online payment accounts (e.g., PayPal) and 27% for Interac Online/e-Transfers. Please see Appendix E for definitions of the mobile payment application, online payment account and other payment methods.

There are variations in use based on demographics. Age appears to be an important factor related to the use of alternative payment methods; the proportion of respondents using all methods listed decreases as age increases. For mobile payment applications in particular, age is the most prominent factor, since younger respondents (18-34) are 3 and 15 times more likely to have made a mobile payment in the past year compared with middle-aged (35-54) and older respondents (55+), respectively.

Single-purpose stored-value cards are popular in the Prairies region, reflected by high levels of ownership and particularly by the number of cards per owner. In contrast, respondents from Quebec have noticeably lower levels of ownership and usage; for example, only 15% report having a single-purpose card, compared with 26% overall. Instead, Quebec residents favour online debit and credit. Ontarians are big users of contactless features in debit and credit cards, but mobile payment is favoured by British Columbia users.

Finally, there are noticeable differences with respect to income and education for online credit card payments. For example, only 26% of respondents with a high school education have made such a payment, compared with 55% of those who are university educated, a difference of close to 30 percentage points. University-educated respondents also tend to have the highest use of contactless credit cards (CTCC) and SVCs.

The $85K plus income group uses alternative payment methods most frequently, with the exception of contactless debit cards (CTDC), used mainly by those earning $45K-85K. Males also use these payment methods more often than females, with the exception of SVCs. There is a small rural and urban divide in the use of CTCC and SVCs. Homeowners' use of CTCC and online credit is higher than renters', while renters report higher use of SVCm and other online payments. Finally, those who live for free use CTDC, mobile and online Interac most often.

Users of either CTCC or CTDC are more likely than the general population to use the

other. Among users of CTDC, 60% have also used CTCC in the past year, and among users of CTCC, 16% report using CTDC in the same time frame. Overall, about 5% of respondents used both CTCC and CTDC in the past year. A detailed discussion of these payment methods and a comparison with 2009 MOP data can be found in Chen, Shen and Stuber (2014).

# 3 How Would You Like to Pay?

This section describes respondents' retail payment choices collected from the DSI. Payment data are usually collected using network data as shown in Figure 1. This figure shows that the use of cash in overall retail payments has decreased during the past 20 years. However, it is incomplete, since new payment innovations have brought about changes to the retail payments landscape (Arango et al. 2012). Furthermore, it may contain inaccuracies, since the cash usage is based on approximations. Therefore, the DSI was designed to include these payment innovations and measure cash more accurately by asking respondents to record all cash and non-cash payments over a three-day period.

In this section, we provide information on transaction characteristics including the demographic characteristics of the respondent, the type of goods purchased and the location of the purchases. Finally, to understand the evolution of cash, we compare the 2013 volume and value shares with those from the 2009 MOP Survey.

## 3.1 Methods of payments at the point of sale

Table 10 summarizes the overall payment shares, in terms of volume and value, for both the 2009 and 2013 MOP surveys. Cash remains a dominant payment method in the 2013 survey, with shares of 43.9% and 23.0% in terms of volume and value, respectively. The cash share in volume declined by 10% from 2009, compared with an increase of 0.3% in value.

The debit payment share in the 2013 MOP is 21.1% and 25.1% in terms of volume and value, respectively. The debit share of volume decreased by about 3.6%, but the reduction in the debit share of value is more acute at 6.6%. The drop in cash and debit share has transferred largely to credit cards, with an overall share in 2013 of 30.8% and 45.9% in terms of volume and value, respectively. This marks an increase of 11.5% in volume and 5.2% in value from 2009.

Cash is mostly used for small-value transactions, since the median transaction value is about $9 in both survey years, increasing from $8 in 2009 to $9 in 2013. In comparison, the median transaction value of debit decreased from $29 in 2009 to $27 in 2013, and that of credit from $40 to $34. Most of the growth in the credit share is attributed to contactless credit (CTCC) payments, since their volume share increased to 19.3% from 5.0%, while the value share also saw an increase from 2.9% to 12.1%. Contactless debit (CTDC) or Flash, which debuted in 2011, constitutes 2.9% and 1.8%, respectively, of the volume and value share. Not surprisingly, the median transaction values for CTDC and CTCC are $14 and $20, respectively, lower than the median debit and credit transaction values. These findings are similar to those from Bagnall et al. (2014), who conduct a seven-country comparison of payment methods that includes the 2009 MOP Survey results.

Stored-value cards—multi-purpose (SVCm) or single-purpose (SVCs)—constitute a small share (less than 3%) in both volume and value. These figures are not directly comparable with 2009 data, in which these two categories were not distinguished. However, the share of SVCm and SVCs combined more than doubled in both value and volume, rising to 3.3% and 2.5% of volume and value, respectively. The median purchase value of SVCm and SVCs combined also increased, to $8. Interestingly, the median SVCm purchase value is $30, which mirrors that of credit, while that of SVCs is closer to cash at $4. Finally, cheques constitute only 0.9% volume share of payments. The value share is 3.5%, a decrease from 3.9% in the 2009 survey. The median cheque value in 2013 was $51. Given that SVCs and cheques constitute small shares, we focus primarily on the three payment choices of cash, debit and credit, and include a discussion of contactless payments. We present the descriptive statistics of the payment shares by transaction value, demographics, type of good purchased and channel. We include debit card cashback in the 2013 transaction values for Table 10 to maintain comparability with the 2009 figures, but exclude cashback in the following discussion.

## 3.2 Transaction characteristics

Tables 11 and 12 show that cash is mostly used for small-value transactions. We compare these value shares with the nominal transaction values from the 2009 MOP Survey for uniformity. For those below $15, cash has a share of 64.3% and 58.0% in terms of volume and value, respectively. This share decreases as the transaction value increases. At transactions above $50, cash constitutes 16.1% and 15.3% in terms of volume and value, respectively. For both volume and value, the debit share is higher in the $25-$50 transaction range than in any other range. Credit is the dominant payment method for transactions above $50, with shares of 53.0% and 52.7% in terms of volume and value, respectively. Both contactless payment methods CTDC and CTCC are used more often for transactions of below $15 than for larger-value transactions.

## 3.3 Demographics

Tables 13 and 14 show payment usage by demographic profiles in terms of volume and value. To find these shares, we calculate the shares for each respondent from their DSI, applying the SQ weights. We found that cash has higher shares of volume in the Prairies (45.6%) and Quebec (44.4%), as well as for the 55+ age group (50.7%), for respondents with income less than $45K (52.0%), for males (46.1%), for high school graduates (49.5%), and for renters (49.6%). In value terms, however, it is slightly different, since the cash share is higher for the Atlantic region (29.2%).

For debit, the volume share is highest for respondents in Quebec (22.2%), for 18-34 year olds (27.3%), for those with incomes between $45 and $85K (22.8%), for females (22.7%), for rural respondents (26.4%), for college/technical school graduates (24.1%), and for renters or those who live for free (about 27%). The only difference for the value share is that high school graduates have the highest share (30.8%).

The credit volume share is the highest in British Columbia (32.6%), and among 35-54 year olds (34.1%), those who earn more than $85K (40.3%), urban (32.0%) and university-

educated (41.2%) respondents, and those who own their own homes (35.0%). Value shares for credit follow the same pattern.

In terms of the volume of contactless payments, CTDC and CTCC are similar; the demographic categories using CTDC and CTCC for larger shares of transactions are respondents in Ontario (5.7% and 24.2% of all debit and credit transactions, respectively) and the Atlantic region (2.3% and 27.9%, respectively), as well as 18-34 year olds (3.6% and 27.4%, respectively) and males (3.5% and 20.3%, respectively). There are differences in terms of income, education, and whether they rent or live for free. The tabulations for value are similar.

## 3.4 Type of goods

The transactions for each type of good are broken down by method of payment in Tables 15 and 16. The "Other" category of goods includes charitable donations, pet supplies and life insurance. Table 15, which displays the volume shares of payment methods for each type of good, shows that travel/parking and entertainment/meals are the goods for which cash has the largest volume shares, at 56.8% and 55.8%, respectively. Compared with other types of goods, gas (21.7%) and personal attire (26.4%) receive the smallest proportion of cash purchases. The situation for debit is reversed; debit volume shares in these two categories (29.9% and 26.4%, respectively) are the highest among the different goods categories, and the debit volume share is lowest for travel/parking (6.9%).

Compared with debit, volume shares for credit are relatively high for most categories of goods, particularly gas (46.8%), durable goods (45.2%) and health care (43.0%). However, in many categories, such as entertainment/meals, travel/parking and hobby/sporting goods, cash is used significantly more frequently than credit.

Contactless credit makes up a large share of total credit volume in purchases for groceries/drugs (30.1%) and entertainment/meals (19.7%). The largest volume share of contactless debit is also its share of entertainment/meals purchases.

With respect to value, cash shares are considerably smaller, since cash is used mostly for low-value purchases. The categories with the highest cash shares are entertainment/meals (37.4%) and professional services (25.5%). The highest-value share for debit is in groceries/drugs (31.5%). The credit value share is highest for health care (57.7%) and personal attire (56.1%), while the value shares of both contactless credit and contactless debit are higher in groceries/drugs than in most other categories. This suggests that contactless payment methods are more likely to be used for higher-value purchases in the groceries/drugs category than in other goods categories.

## 3.5 Channel

Volume and value shares for different payment methods by channel are shown in Tables 17 and 18. For purchases made in stores, cash has the largest volume share (41.8%) and credit the largest value share (46.5%). For purchases made online or over the phone, however, credit card payments predominate in both value and volume, with 83.6% of all online payments made on a computer (value 91.9%), 68.1% of all online payments made on a mobile device or tablet (value 83.1%), and 84.8% of payments made over the phone (value 84.6%). Online payments have become increasingly important, since according to the 2012 Canadian Internet Use Survey,

83% of Canadian households had access to the Internet at home in 2012, while only 79% of Canadian households did in 2010.

We also consider person-to-person and mail payments. In person-to-person transactions, cash is the most frequently used payment method, with a 76.7% volume share and 52.3% value share. Credit is also used for larger person-to-person transactions (for example, through PayPal), with an 18.4% value share. The shares for cash, debit and credit for payments by mail are all quite low: the payment method most commonly used by mail is the cheque, which is not shown in the table.

# 4 Consumer Assessments and Perceptions

The 2013 MOP Survey contains a section on consumers' perceptions or assessments. These consumer perceptions were present in the 2009 MOP Survey and were used to gauge subjective judgments of various payment methods on a scale of 1 to 5 with respect to each of the following five attributes: ease of use, costliness, security, ease of set-up and level of acceptance. Table E.2 provides definitions of these attributes. Figures 2 to 6 show how respondents rated cash, debit, credit and payment innovations such as mobile payment, online payment from bank accounts and credit cards, online payment accounts, stored-value cards, and the contactless feature of a credit or debit card.

Cash is perceived positively with respect to all characteristics considered. It was identified as the easiest payment method to use, with roughly 74% of respondents assigning it the top rating of very easy. This proportion is 15 percentage points higher than the percentage of respondents giving top ratings to either credit or debit cards. Moreover, cash is viewed by 92.5% of Canadians as being almost always accepted. Its most negative ratings among all attributes are for security. Most respondents (54.8%) view cash as being very secure, but 7.2% view it as either risky or very risky. However, cash is still rated as secure to use by more respondents than either credit or debit cards are.

Table 19 shows the cash share of diary transactions along with relative perceptions of cash for different demographic profiles. The relative cash perception rating is derived from the scores respondents gave cash, credit and debit in the "perceptions" section of the MOP Survey, and is a measure of the degree to which consumers' perceptions favour cash over credit and debit. In the table, all relative perception ratings of cash are above 1.00, which indicates that the average respondent views cash more positively than debit or credit with respect to all attributes. In general, the demographic categories with the highest cash shares (respondents aged 55+, with income less than $45K, or with only a high school education) also have more positive perceptions of cash with respect to ease of use and security.

Debit and credit cards are similarly perceived with respect to most characteristics. One noticeable difference relates to cost, which includes all costs associated with using the payment method, such as fees and interest. Over 40% of respondents associate credit cards with having a high cost, the highest percentage for any payment method considered. Debit cards are also considered easier to set up than credit cards. For questions relating to perceptions, no distinction was made between the contactless feature of a credit card and that of a debit card. Overall, the contactless feature is perceived as one of the most insecure and least widely accepted payment methods.

Overall, respondents are less certain about how to rank payment innovations compared with cash, debit and credit cards. They choose the middle category more often than when ranking cash, debit or credit. Mobile and contactless payments are perceived similarly, although mobile payment applications are considered as more difficult to set up, as well as harder to use. Among online payments, those involving a bank account or credit card are considered easier to use and more widely accepted than those using an online payment account. Prepaid cards issued by Visa or MasterCard are viewed as more costly compared with other payment innovations, but are also considered the most widely accepted.

# 5 Conclusion

As shown in Figure 1, the share of point-of-sale transactions made with cash, estimated from network and ABM data, has decreased steadily over time. This picture is incomplete, however, since new payment innovations have brought about changes to the retail payments landscape (Arango et al. 2012). As a result, a large part of the 2013 MOP Survey is devoted to measuring non-cash payments such as credit card usage, especially contactless payments. In comparison with the 2009 MOP, the 2013 MOP has found that credit card usage has made large inroads at the expense of cash and debit card payments. The 2013 MOP Survey reveals that cash usage has fallen but still constitutes about 44% of the volume of transactions.

Overall, we find that payment choice is correlated with three factors: (1) demographics, (2) pricing incentives such as rewards, and (3) consumers' perceptions toward payment instruments. Cash is used extensively by older, lower-income and high-school-educated respondents. Pricing incentives matter, since 73% of respondents state that they have rewards on their credit cards. These respondents tend to have higher income and education, but have a lower level of cash usage. Consumers' perceptions of cash versus debit and credit cards reveal that it is favoured because of its low cost, security, ease of use and wide acceptance as a form of payment.

Previous research by Arango, Huynh and Sabetti (2011) demonstrates that all three factors mentioned above matter for payment choice. Further, Wakamori and Welte (2012) find that, despite rewards and acceptance, consumers still have a preference for using cash, especially for small-value transactions. Fung, Huynh and Sabetti (2012) find that the usage of contactless credit and stored-value cards would lower cash usage by 10-14%. It would be worthwhile to integrate this research to further investigate the effect of payment innovations on the substitution patterns of cash, debit and credit.

The Bank of Canada is currently undertaking a cost study to address issues regarding the merchant or supply-side views on pricing incentives and the diffusion of card payments. Previous research by Arango, Huynh and Sabetti (2014) and Huynh, Schmidt-Dengler and Stix (2014) have demonstrated the important role that consumers' perceptions of card acceptance play in payment choice and in cash holdings, respectively. The 2013 MOP Survey includes information about the stores at which consumers transact. Therefore, it will be useful input and will complement the upcoming cost study. Understanding consumers and merchant payment behaviour would help to facilitate an investigation of two-sided markets (see Rysman (2009) for information on two-sided markets).

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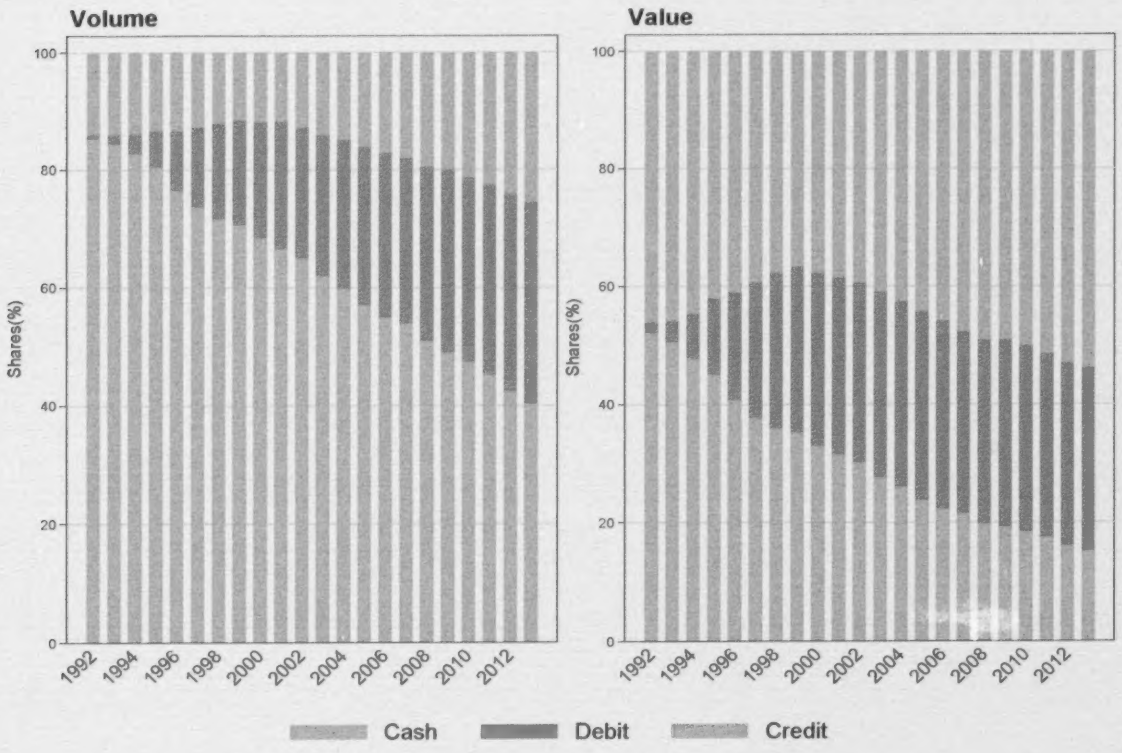
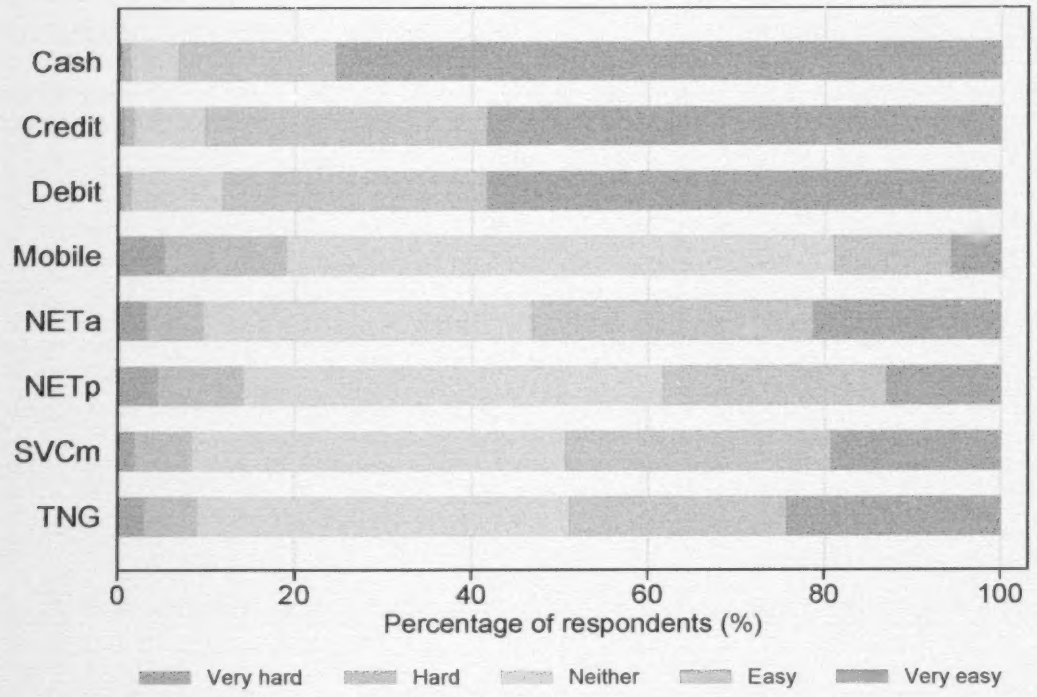
Figure 1: Shares of point-of-sale transactions, by payment method



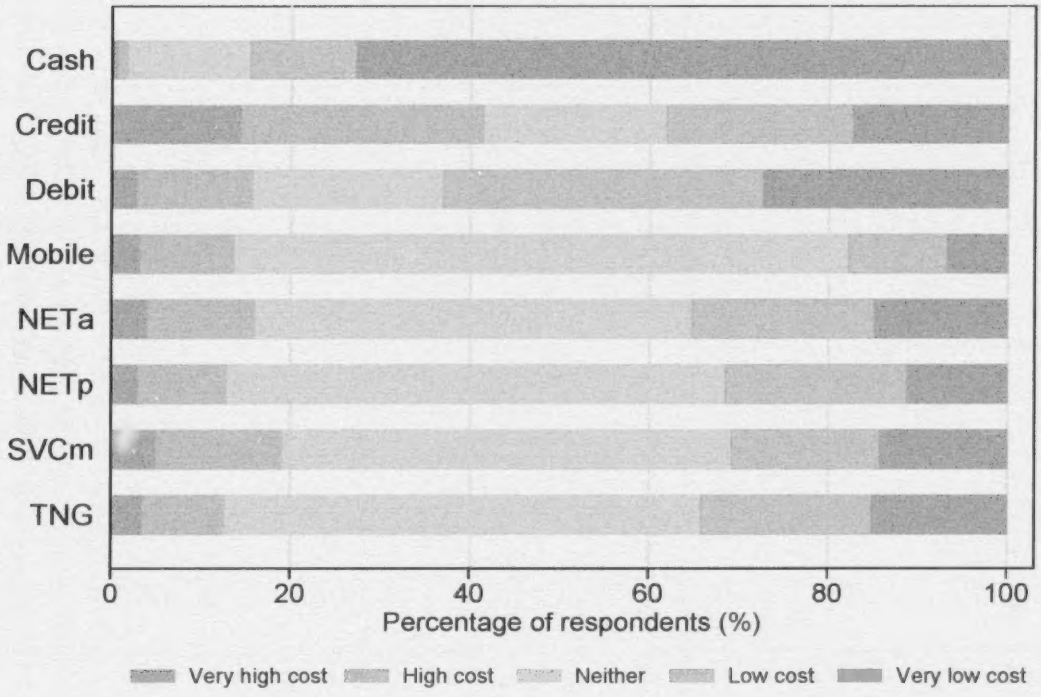

Note: Volume is the number of transactions and value is the dollar amount of the transactions. The statistics are computed from network data. Sources: Arango et al. (2012), Bank for International Settlements Red Book, and Bank of Canada.

Figure 2: Ease



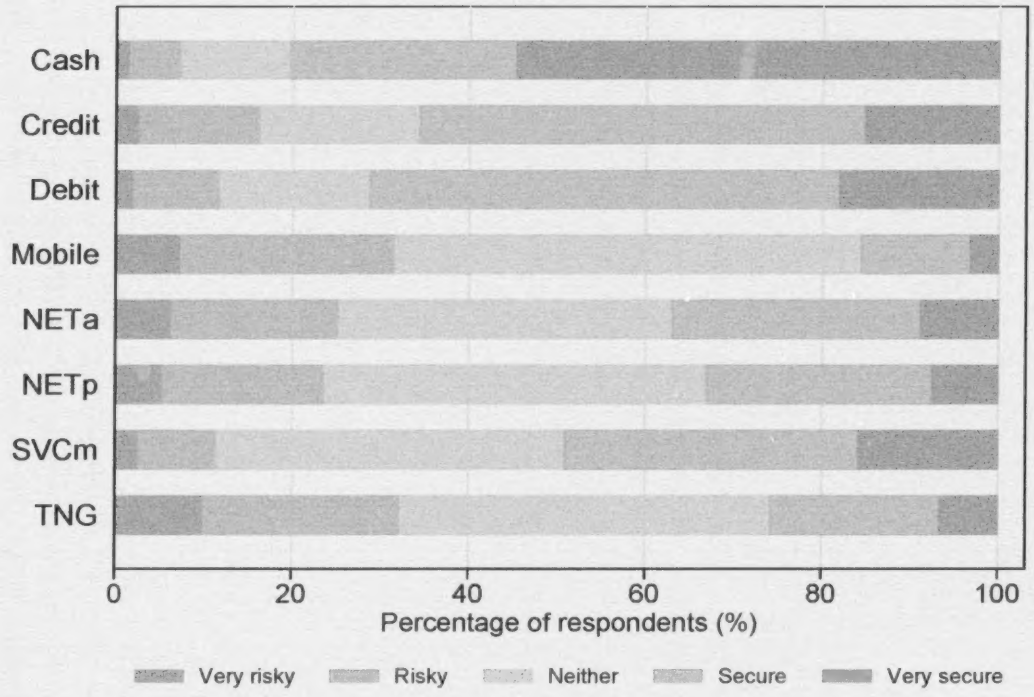

Note: Respondents were asked to rank how easy or hard each method of payment is to use, on a scale of 1 (very hard) to 5 (very easy). Respondents were encouraged to select the middle category if they were unsure. This graph shows the proportion of responses in each category, by method of payment. NETa: online payment from bank account/credit card, NETp: online payment account (e.g., PayPal), SVCm: stored-value card, TNG: contactless feature of a credit/debit card. Data are from the 2013 MOP SQ (SQ weights used).

Figure 3: Cost



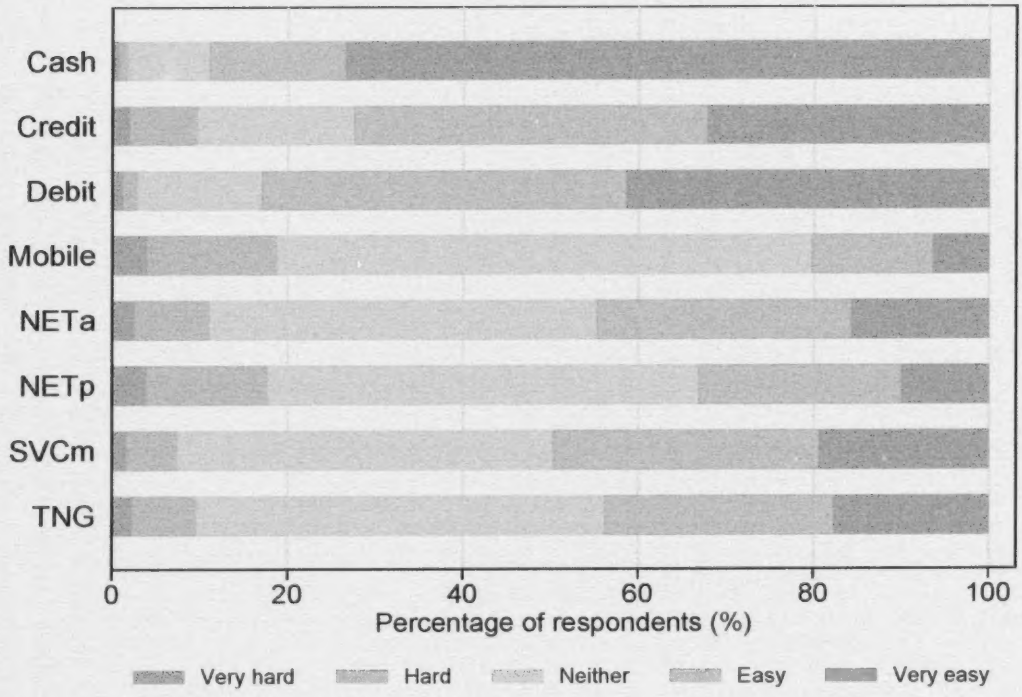

Note: Respondents were asked to rank how costly each method of payment is to use, on a scale of 1 (very high cost) to 5 (very low cost). Respondents were encouraged to select the middle category if they were unsure. This graph shows the proportion of responses in each category, by method of payment. NETa: online payment from bank account/credit card, NETp: online payment account (e.g., PayPal), SVCm: stored-value card, TNG: contactless feature of a credit/debit card. Data are from the 2013 MOP SQ (SQ weights used).

Figure 4: Security



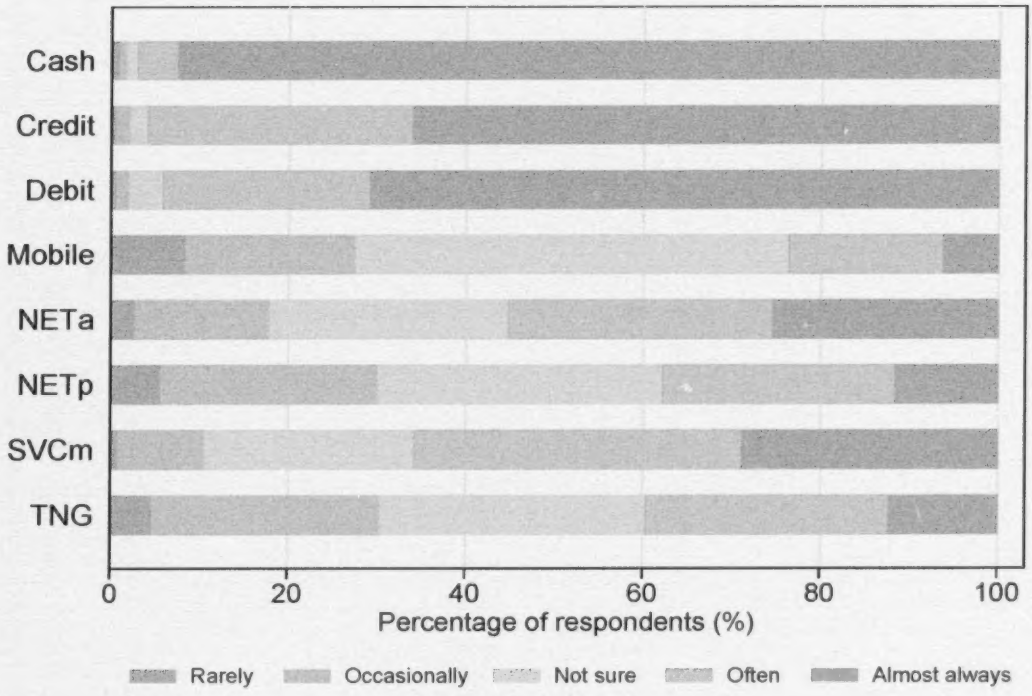

Note: Respondents were asked to rank how secure each method of payment is to use, on a scale of 1 (very risky/insecure) to 5 (very secure). Respondents were encouraged to select the middle category if they were unsure. This graph shows the proportion of responses in each category, by method of payment. NETa: online payment from bank account/credit card, NETp: online payment account (e.g., PayPal), SVCm: stored-value card, TNG: contactless feature of a credit/debit card. Data are from the 2013 MOP SQ (SQ weights used).

Figure 5: Set-up




Note: Respondents were asked to rank how easy or hard it is to get/set up each method of payment, on a scale of 1 (very hard) to 5 (very easy). Respondents were encouraged to select the middle category if they were unsure. This graph shows the proportion of responses in each category, by method of payment. NETa: online payment from bank account/credit card, NETp: online payment account (e.g., PayPal), SVCm: stored-value card, TNG: contactless feature of a credit/debit card. Data are from the 2013 MOP SQ (SQ weights used).

Figure 6: Acceptance




Note: Respondents were asked to rank how widely accepted each method of payment is, on a scale of 1 (rarely accepted) to 4 (almost always accepted). A separate category was provided for *Not sure* responses. This graph shows the proportion of responses in each category, by method of payment. NETa: online payment from bank account/credit card, NETp: online payment account (e.g., PayPal), SVCm: stored-value card, TNG: contactless feature of a credit/debit card. Data are from the 2013 MOP SQ (SQ weights used).

Table 1: Cash management

| | **Cash on hand** | **Other cash** | **Employer/business** | **Family/friends** |
|---|---|---|---|---|
| | *mean in $* | *median in $* | *proportion* | *proportion* |
| OVERALL | 84 | 300 | 0.110 | 0.159 |
| REGION | | | | |
| Atlantic | 93 | 350 | 0.134 | 0.148 |
| Quebec | 76 | 200 | 0.103 | 0.124 |
| Ontario | 89 | 385 | 0.106 | 0.183 |
| Prairies | 85 | 300 | 0.117 | 0.145 |
| British Columbia | 79 | 300 | 0.116 | 0.180 |
| AGE | | | | |
| 18-34 | 61 | 200 | 0.175 | 0.279 |
| 35-54 | 69 | 300 | 0.104 | 0.134 |
| 55+ | 119 | 400 | 0.063 | 0.086 |
| INCOME | | | | |
| Less than $45K | 75 | 280 | 0.126 | 0.167 |
| $45K-85K | 95 | 300 | 0.109 | 0.158 |
| $85K or more | 82 | 300 | 0.095 | 0.152 |
| GENDER | | | | |
| Male | 94 | 300 | 0.099 | 0.149 |
| Female | 75 | 300 | 0.121 | 0.169 |
| URBAN/RURAL | | | | |
| Rural | 82 | 200 | 0.149 | 0.151 |
| Urban | 85 | 300 | 0.102 | 0.161 |
| EDUCATION | | | | |
| High school | 87 | 300 | 0.156 | 0.173 |
| College / tech. school | 79 | 300 | 0.085 | 0.156 |
| University | 85 | 300 | 0.086 | 0.147 |
| HOME OWNERSHIP | | | | |
| Rent | 64 | 400 | 0.144 | 0.188 |
| Own | 92 | 300 | 0.097 | 0.129 |
| Live for free | 64 | 125 | 0.143 | 0.396 |

Note: The column *Cash on hand* shows the mean amount of cash in a respondent's wallet, purse or pockets. Before computing the mean, values above 10,000 are divided by 100 if the respondent is from Quebec (because Quebec residents might use the comma to represent the decimal point), and removed otherwise. *Other cash* shows the median of cash stored elsewhere, such as at home or in a vehicle. The median is used because of the many extreme values reported for this variable. The columns *Employer/business* and *Family/friends* are the proportion of respondents who reported receiving cash at least once in a typical month from these sources. Data are from the 2013 MOP SQ (SQ weights used).

Table 2: Cash holdings, by denomination

| | $100-$50 | $20 | $10-$5 | $2-$1 |
|---|---|---|---|---|
| OVERALL | 0.127 | 0.713 | 0.755 | 0.639 |
| REGION | | | | |
| Atlantic | 0.165 | 0.709 | 0.720 | 0.594 |
| Quebec | 0.107 | 0.719 | 0.745 | 0.684 |
| Ontario | 0.117 | 0.674 | 0.772 | 0.615 |
| Prairies | 0.160 | 0.790 | 0.754 | 0.653 |
| British Columbia | 0.128 | 0.711 | 0.739 | 0.635 |
| AGE | | | | |
| 18-34 | 0.110 | 0.670 | 0.746 | 0.662 |
| 35-54 | 0.104 | 0.671 | 0.712 | 0.604 |
| 55+ | 0.164 | 0.790 | 0.808 | 0.658 |
| INCOME | | | | |
| Less than $45K | 0.140 | 0.680 | 0.759 | 0.664 |
| $45K-85K | 0.116 | 0.711 | 0.773 | 0.642 |
| $85K or more | 0.122 | 0.741 | 0.731 | 0.617 |
| GENDER | | | | |
| Male | 0.149 | 0.720 | 0.783 | 0.588 |
| Female | 0.107 | 0.705 | 0.730 | 0.687 |
| URBAN/RURAL | | | | |
| Rural | 0.177 | 0.699 | 0.737 | 0.638 |
| Urban | 0.116 | 0.715 | 0.759 | 0.639 |
| EDUCATION | | | | |
| High school | 0.123 | 0.739 | 0.799 | 0.629 |
| College / tech. school | 0.108 | 0.657 | 0.721 | 0.643 |
| University | 0.134 | 0.753 | 0.742 | 0.650 |
| HOME OWNERSHIP | | | | |
| Rent | 0.141 | 0.677 | 0.746 | 0.644 |
| Own | 0.127 | 0.726 | 0.751 | 0.638 |
| Live for free | 0.098 | 0.679 | 0.831 | 0.631 |

Note: This table shows the proportion of respondents holding a particular denomination from those who report having a positive amount of cash on hand in the DSI. Data are from the 2013 MOP DSI (SQ weights used).

Table 3: Cash withdrawals, according to the SQ

| | ABM | Bank teller | Cashback | ABM | Bank teller | Cashback |
|---|---|---|---|---|---|---|
| | *mean # times* | | | *mean in $* | | |
| OVERALL | 2.7 | 0.7 | 0.7 | 118 | 236 | 43 |
| REGION | | | | | | |
| Atlantic | 2.8 | 0.6 | 0.8 | 126 | 280 | 35 |
| Quebec | 2.9 | 0.4 | 1.1 | 136 | 297 | 40 |
| Ontario | 2.9 | 0.9 | 0.7 | 111 | 232 | 46 |
| Prairies | 2.2 | 0.7 | 0.3 | 121 | 206 | 44 |
| British Columbia | 2.8 | 0.8 | 0.7 | 103 | 226 | 39 |
| AGE | | | | | | |
| 18-34 | 2.7 | 0.7 | 0.6 | 96 | 217 | 39 |
| 35-54 | 2.9 | 0.6 | 1.0 | 113 | 204 | 42 |
| 55+ | 2.5 | 0.9 | 0.6 | 140 | 266 | 47 |
| INCOME | | | | | | |
| Less than $45K | 2.6 | 0.8 | 0.8 | 117 | 244 | 38 |
| $45K-85K | 3.0 | 0.7 | 0.7 | 118 | 241 | 47 |
| $85K or more | 2.6 | 0.6 | 0.7 | 118 | 222 | 42 |
| GENDER | | | | | | |
| Male | 3.0 | 0.7 | 0.6 | 122 | 253 | 44 |
| Female | 2.5 | 0.7 | 0.8 | 113 | 221 | 42 |
| URBAN/RURAL | | | | | | |
| Rural | 2.5 | 0.9 | 0.8 | 122 | 227 | 41 |
| Urban | 2.8 | 0.7 | 0.7 | 117 | 238 | 43 |
| EDUCATION | | | | | | |
| High school | 3.0 | 0.9 | 0.8 | 123 | 230 | 41 |
| College / tech. school | 2.7 | 0.7 | 0.9 | 114 | 248 | 43 |
| University | 2.4 | 0.5 | 0.5 | 117 | 235 | 45 |
| HOME OWNERSHIP | | | | | | |
| Rent | 3.6 | 0.8 | 1.0 | 118 | 247 | 38 |
| Own | 2.5 | 0.7 | 0.7 | 119 | 237 | 45 |
| Live for free | 2.8 | 0.6 | 0.4 | 95 | 188 | 36 |

Note: The first three columns show the mean number of withdrawals per month for all respondents who answered the corresponding question. The means are calculated after replacing the highest 0.5% of values with the 99.5 percentile. The last three columns show the typical amount withdrawn per individual for all respondents who answered the corresponding question. Cashback values over $1,000 are divided by 100 if the respondent is from Quebec, since some Quebec respondents reported very high values for the typical cashback amount and Quebec residents tend to use commas to represent decimal points. Cashback: cashback by debit card at a retailer. Data are from the 2013 MOP SQ (SQ weights used).

Table 4: Debit and credit card ownership

| | **Debit cards** | | **Credit cards** | |
|---|---|---|---|---|
| | *ownership* | *# cards* | *ownership* | *# cards* |
| OVERALL | 0.983 | 1.1 | 0.820 | 1.9 |
| REGION | | | | |
| Atlantic | 0.973 | 1.1 | 0.765 | 1.8 |
| Quebec | 0.985 | 1.1 | 0.808 | 1.7 |
| Ontario | 0.990 | 1.1 | 0.835 | 2.0 |
| Prairies | 0.970 | 1.1 | 0.835 | 1.9 |
| British Columbia | 0.985 | 1.1 | 0.809 | 1.8 |
| AGE | | | | |
| 18-34 | 0.990 | 1.1 | 0.741 | 1.4 |
| 35-54 | 0.985 | 1.2 | 0.856 | 2.0 |
| 55+ | 0.976 | 1.0 | 0.848 | 2.1 |
| INCOME | | | | |
| Less than $45K | 0.984 | 1.0 | 0.712 | 1.5 |
| $45K-85K | 0.986 | 1.2 | 0.854 | 1.9 |
| $85K or more | 0.980 | 1.2 | 0.895 | 2.1 |
| GENDER | | | | |
| Male | 0.980 | 1.1 | 0.812 | 1.8 |
| Female | 0.986 | 1.1 | 0.827 | 1.9 |
| URBAN/RURAL | | | | |
| Rural | 0.990 | 1.0 | 0.796 | 1.7 |
| Urban | 0.982 | 1.2 | 0.825 | 1.9 |
| EDUCATION | | | | |
| High school | 0.984 | 1.0 | 0.726 | 1.6 |
| College / tech. school | 0.985 | 1.2 | 0.844 | 1.8 |
| University | 0.984 | 1.2 | 0.917 | 2.3 |
| HOME OWNERSHIP | | | | |
| Rent | 0.985 | 1.1 | 0.663 | 1.2 |
| Own | 0.983 | 1.2 | 0.887 | 2.1 |
| Live for free | 0.985 | 1.1 | 0.618 | 1.0 |

Note: Ownership is the proportion of respondents with at least one credit/debit card. A respondent is considered to own a debit card if he/she reports having access to a non-zero number of debit cards or provides information for a main bank account. The number of cards is the average number of credit/debit cards. In the calculation of this average, the highest 0.5% of values are replaced with the 99.5 percentile. Data are from the 2013 MOP SQ (SQ weights used).

Table 5: Main bank account features

| | **Account fee** | **Transaction fee** | **Balance** | **Duration** |
|---|---|---|---|---|
| | *proportion* | *proportion* | *mean in $* | *median # years* |
| OVERALL | 0.441 | 0.378 | 3,401 | 15 |
| REGION | | | | |
| Atlantic | 0.460 | 0.423 | 3,256 | 15 |
| Quebec | 0.495 | 0.436 | 2,768 | 20 |
| Ontario | 0.381 | 0.363 | 3,482 | 15 |
| Prairies | 0.502 | 0.314 | 4,374 | 15 |
| British Columbia | 0.421 | 0.360 | 3,121 | 15 |
| AGE | | | | |
| 18-34 | 0.499 | 0.484 | 2,708 | 8 |
| 35-54 | 0.543 | 0.418 | 2,937 | 15 |
| 55+ | 0.282 | 0.251 | 4,495 | 25 |
| INCOME | | | | |
| Less than $45K | 0.470 | 0.412 | 2,294 | 17 |
| $45K-85K | 0.450 | 0.365 | 3,662 | 15 |
| $85K or more | 0.399 | 0.352 | 4,271 | 15 |
| GENDER | | | | |
| Male | 0.446 | 0.377 | 3,709 | 15 |
| Female | 0.436 | 0.378 | 3,105 | 17 |
| URBAN/RURAL | | | | |
| Rural | 0.481 | 0.466 | 2,972 | 15 |
| Urban | 0.432 | 0.358 | 3,495 | 15 |
| EDUCATION | | | | |
| High school | 0.445 | 0.422 | 3,025 | 17 |
| College / tech. school | 0.482 | 0.399 | 3,117 | 15 |
| University | 0.368 | 0.287 | 4,289 | 15 |
| HOME OWNERSHIP | | | | |
| Rent | 0.565 | 0.505 | 1,720 | 10 |
| Own | 0.407 | 0.336 | 3,933 | 20 |
| Live for free | 0.388 | 0.455 | 2,926 | 10 |

Note: *Account fee* is the proportion of respondents who paid a fee to maintain their bank account in the previous month. *Transaction fee* is the proportion who paid a fee to make a debit card transaction (purchase, withdrawal, bill payment, etc.) in the previous month. *Balance* is the mean bank account balance at the time of completing the survey, and is calculated using the midpoints of value ranges in the SQ. *Duration* is the mean number of years respondents have owned their bank accounts. This mean does not include durations that are greater than the age of the respondent. Data are from the 2013 MOP SQ (SQ weights used).

Table 6: Main credit card features

| | **Annual fee** | **Rewards** | **Low interest rate** |
|---|---|---|---|
| | *proportion* | *proportion* | *proportion* |
| OVERALL | 0.205 | 0.730 | 0.121 |
| REGION | | | |
| Atlantic | 0.245 | 0.621 | 0.108 |
| Quebec | 0.241 | 0.676 | 0.133 |
| Ontario | 0.167 | 0.756 | 0.116 |
| Prairies | 0.207 | 0.763 | 0.120 |
| British Columbia | 0.227 | 0.776 | 0.123 |
| AGE | | | |
| 18-34 | 0.209 | 0.715 | 0.124 |
| 35-54 | 0.218 | 0.728 | 0.091 |
| 55+ | 0.190 | 0.742 | 0.149 |
| INCOME | | | |
| Less than $45K | 0.143 | 0.627 | 0.141 |
| $45K-85K | 0.202 | 0.721 | 0.132 |
| $85K or more | 0.275 | 0.837 | 0.094 |
| GENDER | | | |
| Male | 0.207 | 0.739 | 0.128 |
| Female | 0.204 | 0.721 | 0.115 |
| URBAN/RURAL | | | |
| Rural | 0.190 | 0.662 | 0.128 |
| Urban | 0.209 | 0.744 | 0.120 |
| EDUCATION | | | |
| High school | 0.134 | 0.650 | 0.155 |
| College / tech. school | 0.218 | 0.704 | 0.107 |
| University | 0.276 | 0.845 | 0.107 |
| HOME OWNERSHIP | | | |
| Rent | 0.177 | 0.549 | 0.160 |
| Own | 0.222 | 0.776 | 0.116 |
| Live for free | 0.123 | 0.647 | 0.088 |

Note: *Annual fee* is the proportion of respondents who have annual fees on their credit cards. *Rewards* is the proportion of respondents with a rewards program on their main credit card. *Low interest rate* is the proportion of respondents with an interest rate <5%. Data are from the 2013 MOP SQ (SQ weights used).

Table 7: Main credit card spending

| | **Limit under 2K** | **Limit 10K+** | **Spending past month** | | **Revolver** |
|---|---|---|---|---|---|
| | *proportion* | *proportion* | *mean in $* | *median in $* | *proportion* |
| OVERALL | 0.173 | 0.395 | 1169 | 608 | 0.276 |
| REGION | | | | | |
| Atlantic | 0.172 | 0.415 | 1189 | 700 | 0.391 |
| Quebec | 0.244 | 0.252 | 1089 | 500 | 0.320 |
| Ontario | 0.143 | 0.444 | 1170 | 616 | 0.270 |
| Prairies | 0.161 | 0.416 | 1148 | 698 | 0.178 |
| British Columbia | 0.149 | 0.462 | 1316 | 757 | 0.287 |
| AGE | | | | | |
| 18-34 | 0.302 | 0.240 | 1006 | 500 | 0.337 |
| 35-54 | 0.142 | 0.431 | 1244 | 646 | 0.332 |
| 55+ | 0.114 | 0.465 | 1207 | 698 | 0.176 |
| INCOME | | | | | |
| Less than $45K | 0.257 | 0.252 | 722 | 364 | 0.352 |
| $45K-85K | 0.189 | 0.354 | 1064 | 530 | 0.261 |
| $85K or more | 0.088 | 0.552 | 1638 | 1032 | 0.229 |
| GENDER | | | | | |
| Male | 0.158 | 0.439 | 1168 | 565 | 0.262 |
| Female | 0.187 | 0.353 | 1170 | 720 | 0.289 |
| URBAN/RURAL | | | | | |
| Rural | 0.236 | 0.336 | 1169 | 500 | 0.291 |
| Urban | 0.159 | 0.407 | 1169 | 655 | 0.273 |
| EDUCATION | | | | | |
| High school | 0.248 | 0.306 | 860 | 421 | 0.295 |
| College / tech. school | 0.165 | 0.373 | 1179 | 615 | 0.339 |
| University | 0.112 | 0.508 | 1480 | 1000 | 0.173 |
| HOME OWNERSHIP | | | | | |
| Rent | 0.344 | 0.204 | 695 | 300 | 0.426 |
| Own | 0.126 | 0.438 | 1279 | 750 | 0.244 |
| Live for free | 0.368 | 0.337 | 1012 | 485 | 0.302 |

Note: The first two columns report the proportion of respondents who indicated a spending limit on their main credit card in a certain range. The columns under *Spending past month* show the mean and median amounts charged to respondents' credit cards in the previous month. In the calculation of the mean, the highest 2% of values are replaced with the 98th percentile. *Revolver* is the proportion of respondents who did not pay off their full credit card balance in the previous month. Data are from the 2013 MOP SQ (SQ weights used).

Table 8: Contactless and stored-value card ownership

| | CTDC | CTCC | SVCm | | SVCs | |
|---|---|---|---|---|---|---|
| | *ownership* | *ownership* | *ownership* | *# cards* | *ownership* | *# cards* |
| OVERALL | 0.211 | 0.455 | 0.113 | 1.4 | 0.258 | 2.0 |
| REGION | | | | | | |
| Atlantic | 0.312 | 0.413 | 0.160 | 1.2 | 0.272 | 1.5 |
| Quebec | 0.096 | 0.350 | 0.076 | 1.4 | 0.149 | 1.5 |
| Ontario | 0.280 | 0.548 | 0.123 | 1.3 | 0.289 | 1.9 |
| Prairies | 0.227 | 0.430 | 0.111 | 1.5 | 0.315 | 2.5 |
| British Columbia | 0.176 | 0.454 | 0.125 | 1.4 | 0.281 | 2.1 |
| AGE | | | | | | |
| 18-34 | 0.266 | 0.545 | 0.178 | 1.3 | 0.326 | 2.0 |
| 35-54 | 0.209 | 0.464 | 0.105 | 1.5 | 0.283 | 2.0 |
| 55+ | 0.158 | 0.384 | 0.066 | 1.3 | 0.175 | 1.9 |
| INCOME | | | | | | |
| Less than $45K | 0.195 | 0.371 | 0.111 | 1.3 | 0.166 | 1.7 |
| $45K-85K | 0.197 | 0.444 | 0.122 | 1.4 | 0.291 | 2.1 |
| $85K or more | 0.243 | 0.548 | 0.104 | 1.4 | 0.318 | 2.0 |
| GENDER | | | | | | |
| Male | 0.223 | 0.502 | 0.128 | 1.4 | 0.231 | 1.9 |
| Female | 0.199 | 0.409 | 0.098 | 1.4 | 0.283 | 2.0 |
| URBAN/RURAL | | | | | | |
| Rural | 0.160 | 0.428 | 0.120 | 1.3 | 0.218 | 1.7 |
| Urban | 0.222 | 0.461 | 0.111 | 1.4 | 0.267 | 2.0 |
| EDUCATION | | | | | | |
| High school | 0.194 | 0.364 | 0.113 | 1.4 | 0.199 | 1.7 |
| College / tech. school | 0.220 | 0.476 | 0.118 | 1.3 | 0.282 | 1.9 |
| University | 0.220 | 0.526 | 0.106 | 1.4 | 0.310 | 2.3 |
| HOME OWNERSHIP | | | | | | |
| Rent | 0.189 | 0.446 | 0.164 | 1.2 | 0.229 | 1.6 |
| Own | 0.211 | 0.453 | 0.097 | 1.4 | 0.265 | 2.0 |
| Live for free | 0.324 | 0.590 | 0.127 | 1.3 | 0.266 | 2.4 |

Note: CTDC: contactless feature of a debit card; CTCC: contactless feature of a credit card; SVCm: multi-purpose stored-value cards issued by Visa, MasterCard or American Express; SVCs: single-purpose stored-value cards issued by a store. Ownership is the proportion of respondents with at least one stored-value card for SVCs and SVCm, and the proportion who reported having a contactless feature on their main debit cards and credit cards, respectively, for CTDC and CTCC. The number of cards is the average number of stored-value cards held by owners, that is, respondents who reported having at least one. In the calculation of this average, the highest 0.5% of values are replaced with the 99.5 percentile. Data are from the 2013 MOP SQ (SQ weights used).

Table 9: Use of alternative payment methods

| | Contactless | | Stored-value cards | | | | Online payment methods | | |
|---|---|---|---|---|---|---|---|---|---|
| | CTDC | CTCC | SVCm | SVCs | SVC | Mobile | Interac | Credit | Account |
| OVERALL | 0.091 | 0.334 | 0.225 | 0.380 | 0.476 | 0.066 | 0.269 | 0.407 | 0.312 |
| REGION | | | | | | | | | |
| Atlantic | 0.141 | 0.297 | 0.253 | 0.428 | 0.536 | 0.068 | 0.283 | 0.385 | 0.288 |
| Quebec | 0.076 | 0.237 | 0.176 | 0.232 | 0.322 | 0.047 | 0.333 | 0.454 | 0.313 |
| Ontario | 0.112 | 0.422 | 0.243 | 0.428 | 0.520 | 0.070 | 0.266 | 0.414 | 0.334 |
| Prairies | 0.068 | 0.291 | 0.199 | 0.437 | 0.519 | 0.062 | 0.202 | 0.334 | 0.267 |
| British Columbia | 0.062 | 0.329 | 0.279 | 0.406 | 0.537 | 0.091 | 0.244 | 0.412 | 0.322 |
| AGE | | | | | | | | | |
| 18-34 | 0.128 | 0.357 | 0.328 | 0.462 | 0.591 | 0.157 | 0.405 | 0.532 | 0.484 |
| 35-54 | 0.094 | 0.344 | 0.246 | 0.413 | 0.520 | 0.046 | 0.290 | 0.450 | 0.333 |
| 55+ | 0.057 | 0.303 | 0.116 | 0.277 | 0.334 | 0.010 | 0.131 | 0.257 | 0.145 |
| INCOME | | | | | | | | | |
| Less than $45K | 0.084 | 0.212 | 0.209 | 0.265 | 0.376 | 0.042 | 0.204 | 0.263 | 0.220 |
| $45K-85K | 0.095 | 0.356 | 0.226 | 0.406 | 0.499 | 0.061 | 0.257 | 0.401 | 0.304 |
| $85K or more | 0.094 | 0.435 | 0.241 | 0.472 | 0.556 | 0.096 | 0.348 | 0.564 | 0.417 |
| GENDER | | | | | | | | | |
| Male | 0.098 | 0.354 | 0.235 | 0.350 | 0.466 | 0.072 | 0.284 | 0.442 | 0.344 |
| Female | 0.085 | 0.314 | 0.215 | 0.409 | 0.485 | 0.060 | 0.254 | 0.374 | 0.282 |
| URBAN/RURAL | | | | | | | | | |
| Rural | 0.082 | 0.269 | 0.230 | 0.315 | 0.421 | 0.061 | 0.284 | 0.375 | 0.297 |
| Urban | 0.093 | 0.348 | 0.224 | 0.394 | 0.488 | 0.067 | 0.265 | 0.414 | 0.315 |
| EDUCATION | | | | | | | | | |
| High school | 0.090 | 0.228 | 0.205 | 0.300 | 0.405 | 0.048 | 0.198 | 0.258 | 0.217 |
| College / tech. school | 0.102 | 0.337 | 0.234 | 0.417 | 0.512 | 0.066 | 0.301 | 0.447 | 0.348 |
| University | 0.074 | 0.467 | 0.239 | 0.432 | 0.525 | 0.090 | 0.314 | 0.551 | 0.387 |
| HOME OWNERSHIP | | | | | | | | | |
| Rent | 0.103 | 0.243 | 0.275 | 0.337 | 0.481 | 0.078 | 0.313 | 0.362 | 0.332 |
| Own | 0.083 | 0.368 | 0.209 | 0.393 | 0.472 | 0.059 | 0.250 | 0.422 | 0.307 |
| Live for free | 0.137 | 0.249 | 0.258 | 0.371 | 0.521 | 0.103 | 0.321 | 0.399 | 0.323 |

Note: CTDC: contactless debit, CTCC: contactless credit, SVCm: stored-value card issued by Visa, MasterCard or American Express, SVCs: store-branded stored-value card, SVC: any stored-value card (SVCm and SVCs combined), Mobile: mobile payment application. Interac, Credit and Account represent online payments made via Interac Online/e-Transfer, credit card and an online payment account, respectively. The table shows the proportion of respondents who reported using a particular method of payment at least once in the past year out of all those who answered the corresponding question in the SQ. Data are from the 2013 MOP SQ (SQ weights used).

Table 10: Composition of payments: 2009 vs. 2013

| | **Cash** | **Debit** | ***CTDC*** | **Credit** | ***CTCC*** | **SVCm** | **SVCs** | **SVC** | **Cheque** |
|---|---|---|---|---|---|---|---|---|---|
| Volume shares | | | | | | | | | |
| 2009 | 0.537 | 0.247 | - | 0.193 | *0.050* | 0.014 | | 0.014 | 0.008 |
| 2013 | 0.439 | 0.211 | *0.029* | 0.308 | *0.193* | 0.011 | 0.022 | 0.033 | 0.009 |
| Value shares | | | | | | | | | |
| 2009 | 0.227 | 0.317 | - | 0.407 | *0.029* | 0.010 | | 0.010 | 0.039 |
| 2013 | 0.230 | 0.251 | *0.018* | 0.459 | *0.121* | 0.016 | 0.009 | 0.025 | 0.035 |
| Median purchase ($) | | | | | | | | | |
| 2009 | 8 | 29 | - | 40 | *43* | 5 | | 5 | 60 |
| 2013 | 9 | 27 | *14* | 34 | *20* | 30 | 4 | 8 | 51 |

Note: The table shows the proportion of the total volume and value of transactions by method of payment, across all diaries. CTDC: contactless debit, CTCC: contactless credit, SVCm: stored-value card issued by Visa, MasterCard or American Express, SVCs: store-branded stored-value card, SVC: any stored-value card (SVCm and SVCs combined). Contactless debit and credit shares are a fraction of the total volume/value of all debit and credit card purchases, respectively; rows sum to one, excluding CTDC, CTCC, SVCm and SVCs. SVCm and SVCs were a single category in the 2009 MOP. Transaction values include cashback by debit card. Data are from the 2009 and 2013 MOP DSIs (2009 DSI weights and 2013 SQ weights used).

Table 11: Payment shares: Volume, by transaction amount

| | **Cash** | **Debit** | ***CTDC*** | **Credit** | ***CTCC*** |
|---|---|---|---|---|---|
| <$15 | 0.643 | 0.140 | *0.053* | 0.167 | *0.327* |
| $15-$25 | 0.433 | 0.241 | *0.028* | 0.298 | *0.206* |
| $25-$50 | 0.289 | 0.291 | *0.020* | 0.391 | *0.191* |
| >$50 | 0.161 | 0.261 | *0.015* | 0.530 | *0.106* |

Note: The table shows the proportion of the total volume of transactions by method of payment, according to the value range of the transaction. CTDC: contactless debit, CTCC: contactless credit. Contactless debit and credit shares are a fraction of the total volume of all debit and credit card purchases, respectively. Rows do not sum to one, since stored-value cards and cheques are not shown. Data are from the 2013 MOP DSI (SQ weights used).

Table 12: Payment shares: Value, by transaction amount

| | **Cash** | **Debit** | ***CTDC*** | **Credit** | ***CTCC*** |
|---|---|---|---|---|---|
| <$15 | 0.580 | 0.170 | *0.048* | 0.209 | *0.288* |
| $15-$25 | 0.427 | 0.245 | *0.028* | 0.301 | *0.197* |
| $25-$50 | 0.285 | 0.289 | *0.021* | 0.397 | *0.193* |
| >$50 | 0.153 | 0.252 | *0.013* | 0.527 | *0.093* |

Note: The table shows the proportion of the total value of transactions by method of payment, according to the value range of the transaction. The highest 1% of transaction values are replaced with the 99th percentile. CTDC: contactless debit, CTCC: contactless credit. Contactless debit and credit shares are a fraction of the total volume of all debit and credit card purchases, respectively. Rows do not sum to one, since stored-value cards and cheques are not shown. Data are from the 2013 MOP DSI (SQ weights used).

Table 13: Payment shares: Volume, by socio-demographics

| | **Cash** | **Debit** | ***CTDC*** | **Credit** | ***CTCC*** |
|---|---|---|---|---|---|
| OVERALL | 0.439 | 0.211 | *0.029* | 0.308 | *0.193* |
| REGION | | | | | |
| Atlantic | 0.432 | 0.219 | *0.023* | 0.315 | *0.279* |
| Quebec | 0.444 | 0.222 | *0.007* | 0.309 | *0.141* |
| Ontario | 0.432 | 0.216 | *0.057* | 0.307 | *0.242* |
| Prairies | 0.456 | 0.196 | *0.007* | 0.292 | *0.110* |
| British Columbia | 0.434 | 0.196 | *0.015* | 0.326 | *0.182* |
| AGE | | | | | |
| 18-34 | 0.408 | 0.273 | *0.036* | 0.284 | *0.274* |
| 35-54 | 0.401 | 0.211 | *0.031* | 0.341 | *0.179* |
| 55+ | 0.507 | 0.160 | *0.017* | 0.291 | *0.148* |
| INCOME | | | | | |
| Less than $45K | 0.520 | 0.220 | *0.012* | 0.230 | *0.193* |
| $45K-85K | 0.452 | 0.228 | *0.041* | 0.275 | *0.200* |
| $85K or more | 0.357 | 0.190 | *0.033* | 0.403 | *0.190* |
| GENDER | | | | | |
| Male | 0.461 | 0.195 | *0.035* | 0.301 | *0.203* |
| Female | 0.417 | 0.227 | *0.025* | 0.315 | *0.184* |
| URBAN/RURAL | | | | | |
| Rural | 0.447 | 0.264 | *0.036* | 0.248 | *0.186* |
| Urban | 0.437 | 0.201 | *0.028* | 0.320 | *0.194* |
| EDUCATION | | | | | |
| High school | 0.495 | 0.236 | *0.016* | 0.235 | *0.185* |
| College / tech. school | 0.423 | 0.241 | *0.024* | 0.297 | *0.224* |
| University | 0.385 | 0.148 | *0.063* | 0.412 | *0.168* |
| HOME OWNERSHIP | | | | | |
| Rent | 0.496 | 0.275 | *0.023* | 0.186 | *0.236* |
| Own | 0.418 | 0.189 | *0.029* | 0.350 | *0.191* |
| Live for free | 0.511 | 0.270 | *0.049* | 0.180 | *0.125* |

Note: The table shows the proportion of the total volume of transactions by method of payment, according to a respondent's socio-demographic status. CTDC: contactless debit, CTCC: contactless credit. Contactless debit and credit shares are a fraction of the total volume of all debit and credit card purchases, respectively. Rows do not sum to one, since stored-value cards and cheques are not shown. Data are from the 2013 MOP DSI (SQ weights used).

Table 14: Payment shares: Value, by socio-demographics

| | **Cash** | **Debit** | ***CTDC*** | **Credit** | ***CTCC*** |
|---|---|---|---|---|---|
| OVERALL | 0.231 | 0.248 | *0.018* | 0.461 | *0.120* |
| REGION | | | | | |
| Atlantic | 0.292 | 0.244 | *0.027* | 0.441 | *0.228* |
| Quebec | 0.256 | 0.261 | *0.014* | 0.420 | *0.085* |
| Ontario | 0.211 | 0.252 | *0.028* | 0.489 | *0.152* |
| Prairies | 0.225 | 0.244 | *0.003* | 0.433 | *0.061* |
| British Columbia | 0.227 | 0.222 | *0.008* | 0.498 | *0.111* |
| AGE | | | | | |
| 18-34 | 0.246 | 0.289 | *0.024* | 0.406 | *0.197* |
| 35-54 | 0.195 | 0.253 | *0.017* | 0.498 | *0.090* |
| 55+ | 0.262 | 0.212 | *0.012* | 0.458 | *0.112* |
| INCOME | | | | | |
| Less than $45K | 0.318 | 0.275 | *0.005* | 0.363 | *0.146* |
| $45K-85K | 0.231 | 0.292 | *0.031* | 0.423 | *0.138* |
| $85K or more | 0.167 | 0.192 | *0.012* | 0.563 | *0.098* |
| GENDER | | | | | |
| Male | 0.250 | 0.223 | *0.026* | 0.462 | *0.119* |
| Female | 0.213 | 0.270 | *0.012* | 0.461 | *0.122* |
| URBAN/RURAL | | | | | |
| Rural | 0.274 | 0.292 | *0.024* | 0.351 | *0.086* |
| Urban | 0.221 | 0.238 | *0.016* | 0.485 | *0.126* |
| EDUCATION | | | | | |
| High school | 0.308 | 0.301 | *0.011* | 0.349 | *0.112* |
| College / tech. school | 0.218 | 0.284 | *0.015* | 0.454 | *0.158* |
| University | 0.162 | 0.153 | *0.036* | 0.596 | *0.090* |
| HOME OWNERSHIP | | | | | |
| Rent | 0.316 | 0.354 | *0.019* | 0.285 | *0.134* |
| Own | 0.209 | 0.219 | *0.016* | 0.509 | *0.122* |
| Live for free | 0.273 | 0.284 | *0.031* | 0.363 | *0.057* |

Note: The table shows the proportion of the total value of transactions by method of payment, according to a respondent's socio-demographic status. The highest 1% of transaction values are replaced with the 99th percentile. CTDC: contactless debit, CTCC: contactless credit. Contactless debit and credit shares are a fraction of the total volume of all debit and credit card purchases, respectively. Rows do not sum to one, since stored-value cards and cheques are not shown. Data are from the 2013 MOP DSI (SQ weights used).

Table 15: Payment shares: Volume, by type of good

| | **Cash** | **Debit** | ***CTDC*** | **Credit** | ***CTCC*** | **Overall** |
|---|---|---|---|---|---|---|
| Groceries / drugs | 0.392 | 0.251 | *0.028* | 0.330 | *0.301* | 0.348 |
| Gas | 0.217 | 0.299 | *0.012* | 0.468 | *0.162* | 0.079 |
| Personal attire | 0.264 | 0.264 | *0.005* | 0.428 | *0.082* | 0.043 |
| Health care | 0.346 | 0.181 | *0.030* | 0.430 | *0.115* | 0.025 |
| Hobby / sporting goods | 0.439 | 0.154 | *0.000* | 0.357 | *0.100* | 0.026 |
| Professional services | 0.409 | 0.157 | *0.064* | 0.359 | *0.027* | 0.019 |
| Travel / parking | 0.568 | 0.069 | *0.033* | 0.292 | *0.075* | 0.022 |
| Entertainment / meals | 0.558 | 0.169 | *0.070* | 0.216 | *0.197* | 0.248 |
| Durable goods | 0.289 | 0.212 | *0.007* | 0.452 | *0.056* | 0.036 |
| Other | 0.541 | 0.172 | *0.007* | 0.232 | *0.090* | 0.154 |

Note: The table shows the proportion of the total volume of transactions by method of payment, according to the type of good purchased. CTDC: contactless debit, CTCC: contactless credit. Contactless debit and credit shares are a fraction of the total volume of all debit and credit card purchases, respectively. Rows do not sum to one, since stored-value cards and cheques are not shown. Data are from the 2013 MOP DSI (SQ weights used).

Table 16: Payment shares: Value, by type of good

| | **Cash** | **Debit** | ***CTDC*** | **Credit** | ***CTCC*** | **Overall** |
|---|---|---|---|---|---|---|
| Groceries / drugs | 0.242 | 0.315 | *0.027* | 0.414 | *0.196* | 0.314 |
| Gas | 0.166 | 0.297 | *0.005* | 0.518 | *0.184* | 0.089 |
| Personal attire | 0.134 | 0.270 | *0.007* | 0.561 | *0.053* | 0.056 |
| Health care | 0.159 | 0.176 | *0.012* | 0.577 | *0.031* | 0.046 |
| Hobby / sporting goods | 0.187 | 0.164 | *0.000* | 0.504 | *0.069* | 0.045 |
| Professional services | 0.255 | 0.126 | *0.040* | 0.495 | *0.003* | 0.039 |
| Travel / parking | 0.221 | 0.121 | *0.009* | 0.488 | *0.024* | 0.028 |
| Entertainment / meals | 0.374 | 0.210 | *0.025* | 0.389 | *0.109* | 0.107 |
| Durable goods | 0.174 | 0.204 | *0.002* | 0.528 | *0.060* | 0.083 |
| Other | 0.259 | 0.210 | *0.010* | *0.441* | *0.086* | 0.194 |

Note: The table shows the proportion of the total value of transactions by method of payment, according to the type of good purchased. The highest 1% of transaction values are replaced with the 99th percentile. CTDC: contactless debit, CTCC: contactless credit. Contactless debit and credit shares are a fraction of the total volume of all debit and credit card purchases, respectively. Rows do not sum to one, since stored-value cards and cheques are not shown. Data are from the 2013 MOP DSI (SQ weights used).

Table 17: Payment shares: Volume, by channel

| | **Cash** | **Debit** | ***CTDC*** | **Credit** | ***CTCC*** | **Overall** |
|---|---|---|---|---|---|---|
| Store | 0.418 | 0.227 | *0.026* | 0.317 | *0.201* | 0.878 |
| Online: computer | 0.093 | 0.059 | *0.000* | 0.836 | *0.026* | 0.013 |
| Online: mobile / tablet | 0.044 | 0.116 | *0.000* | 0.681 | *0.295* | 0.001 |
| Phone | 0.110 | 0.008 | *0.000* | 0.848 | *0.240* | 0.004 |
| Person to person | 0.767 | 0.100 | *0.000* | 0.071 | *0.112* | 0.033 |
| Mail | 0.114 | 0.000 | *0.000* | 0.009 | *0.000* | 0.003 |
| Other | 0.629 | 0.100 | *0.007* | 0.212 | *0.148* | 0.068 |

Note: The table shows the proportion of the total volume of transactions by method of payment, according to the channel. CTDC: contactless debit, CTCC: contactless credit. Contactless debit and credit shares are a fraction of the total volume of all debit and credit card purchases, respectively. Rows do not sum to one, since stored-value cards and cheques are not shown. Data are from the 2013 MOP DSI (SQ weights used).

Table 18: Payment shares: Value, by channel

| | **Cash** | **Debit** | ***CTDC*** | **Credit** | ***CTCC*** | **Overall** |
|---|---|---|---|---|---|---|
| Store | 0.224 | 0.275 | *0.017* | 0.465 | *0.121* | 0.808 |
| Online: computer | 0.016 | 0.060 | *0.000* | 0.919 | *0.029* | 0.033 |
| Online: mobile / tablet | 0.010 | 0.053 | *0.000* | 0.831 | *0.683* | 0.001 |
| Phone | 0.046 | 0.015 | *0.000* | 0.846 | *0.176* | 0.017 |
| Person to person | 0.523 | 0.150 | *0.000* | 0.184 | *0.234* | 0.041 |
| Mail | 0.041 | 0.000 | *0.000* | 0.002 | *0.000* | 0.006 |
| Other | 0.359 | 0.176 | *0.021* | 0.311 | *0.128* | 0.095 |

Note: The table shows the proportion of the total value of transactions by method of payment, according to channel. The highest 1% of transaction values are replaced with the 99th percentile. CTDC: contactless debit, CTCC: contactless credit. Contactless debit and credit shares are a fraction of the total volume of all debit and credit card purchases, respectively. Rows do not sum to one, since stored-value cards and cheques are not shown. Data are from the 2013 MOP DSI (SQ weights used).

Table 19: Perception ratings of cash relative to debit cards and credit cards

| | | Payment attributes | | | | |
|---|---|---|---|---|---|---|
| | **Cash transactions** | **Ease** | **Cost** | **Security** | **Set-up** | **Acceptance** |
| | *proportion* | *rating* | *rating* | *rating* | *rating* | *rating* |
| OVERALL | 0.439 | 1.04 | 1.24 | 1.11 | 1.10 | 1.05 |
| REGION | | | | | | |
| Atlantic | 0.432 | 1.04 | 1.27 | 1.09 | 1.10 | 1.05 |
| Quebec | 0.444 | 1.03 | 1.24 | 1.11 | 1.07 | 1.05 |
| Ontario | 0.432 | 1.04 | 1.25 | 1.11 | 1.10 | 1.04 |
| Prairies | 0.456 | 1.04 | 1.23 | 1.11 | 1.12 | 1.04 |
| British Columbia | 0.434 | 1.04 | 1.25 | 1.13 | 1.12 | 1.05 |
| AGE | | | | | | |
| 18-34 | 0.408 | 1.03 | 1.24 | 1.09 | 1.12 | 1.05 |
| 35-54 | 0.401 | 1.03 | 1.26 | 1.11 | 1.09 | 1.05 |
| 55+ | 0.507 | 1.05 | 1.22 | 1.12 | 1.09 | 1.04 |
| INCOME | | | | | | |
| Less than $45K | 0.520 | 1.05 | 1.26 | 1.12 | 1.11 | 1.04 |
| $45K-85K | 0.452 | 1.03 | 1.25 | 1.12 | 1.09 | 1.04 |
| $85K or more | 0.357 | 1.03 | 1.22 | 1.09 | 1.09 | 1.05 |
| GENDER | | | | | | |
| Male | 0.461 | 1.05 | 1.25 | 1.10 | 1.11 | 1.05 |
| Female | 0.417 | 1.03 | 1.24 | 1.12 | 1.09 | 1.04 |
| URBAN/RURAL | | | | | | |
| Rural | 0.447 | 1.04 | 1.24 | 1.10 | 1.09 | 1.05 |
| Urban | 0.437 | 1.04 | 1.24 | 1.11 | 1.10 | 1.05 |
| EDUCATION | | | | | | |
| High school | 0.495 | 1.05 | 1.25 | 1.13 | 1.11 | 1.04 |
| College / tech. school | 0.423 | 1.03 | 1.25 | 1.10 | 1.09 | 1.04 |
| University | 0.385 | 1.04 | 1.21 | 1.10 | 1.09 | 1.05 |
| HOME OWNERSHIP | | | | | | |
| Rent | 0.496 | 1.04 | 1.30 | 1.12 | 1.11 | 1.05 |
| Own | 0.418 | 1.04 | 1.23 | 1.11 | 1.09 | 1.04 |
| Live for free | 0.511 | 1.05 | 1.22 | 1.08 | 1.13 | 1.05 |

Note: The column *Cash transactions* shows the proportion of transactions paid with cash. It is the same as the column for cash share in Table 13. The *Payment attributes* columns report the perceptions of cash relative to payment cards (debit and credit cards) with respect to different attributes. A rating of 1.00 indicates that the average consumer is indifferent between cash and payment cards with respect to the attribute. A rating greater than 1.00 implies a relatively positive perception of cash with respect to the attribute. Data are from the 2013 MOP DSI and the "Perceptions" section of the 2013 MOP SQ (SQ weights used).

# A Survey Methodology

These appendices describe the key methodological components of the 2013 Methods-of-Payment (MOP) Survey, including survey design, data collection and data quality considerations. We also provide a list of important definitions and variables in the last appendix. Since the methodology for the 2013 MOP is based on the previous 2009 survey, the reader should consult Arango and Welte (2012) for further details on the latter. Both the 2009 and 2013 MOP surveys were conducted in collaboration with Ipsos Reid. Updates to the questionnaire, as well as to aspects of data collection and survey methodology, were implemented to meet the research objectives defined by the Bank of Canada.

# B Survey Design

Here we explain the goals of the 2013 MOP Survey and how the survey instruments were enhanced to help meet these goals.

## B.1 Objectives

Survey design is a difficult business. When planning for the 2013 MOP Survey, the survey team sought to strike a balance between consistency with the 2009 MOP, the need for updated content to advance the Currency Department's research agenda, and the continual desire for improved data quality. Based on lessons learned from the 2009 MOP, survey design in 2013 was based on two objectives: (i) to better understand how Canadians not just spend but also manage their cash, via cash withdrawals and other types of cash transactions, and (ii) to evaluate the impact of the use of new payment innovations on cash spending.

In order to measure how well we are meeting these objectives, we use a concept called the *cash identity*. This is a metric used by several central banks that conduct payment diaries as a way to gauge data quality. In the diary component of the MOP Survey it is possible to track a respondent's flow of cash over the course of three days. That is, we observe the amount of cash they have at the start of the diary, how much cash they spend/receive during the three days of completing the diary, and how much cash they have left at the end. In an ideal world, the following equation would hold for each respondent:

$$Cash_{end} = Cash_{start} - Cash_{spent} + Cash_{obtained}.$$

The amount of error in this identity therefore provides a measure of how accurately the diary was completed, similar to how a household might balance its chequebook. As is seen below, the cash identity is a guiding principle that informed changes to the 2013 survey instruments and was also central to the data editing process.

## B.2 Survey instruments

In this section we describe the instruments used for data collection in the 2013 MOP. Following a brief description of the two survey instruments, we highlight lessons learned from the 2009 survey and changes implemented in 2013.

### B.2.1 SQ and DSI

As in 2009, the 2013 MOP uses two survey instruments: the survey questionnaire (SQ) and the diary survey instrument (DSI). The SQ obtains information on the range of payment methods Canadians have available when they go to make a purchase. With respect to cash, the SQ asks about cash holdings and management, for example, the amount of cash Canadians carry and their typical withdrawal habits. The SQ also asks about important features of the respondent's main bank account and credit card, since these can affect payment choice. For example, respondents who have a rewards program on their credit card are more likely to use it to make purchases. Finally, the SQ asks respondents which attributes—ease of use, costliness, security, set-up and acceptance—are important to them when choosing how to pay, and how they rank various payment methods with respect to these attributes.

The DSI is meant to complement the SQ and uses the format of a diary to track Canadians' actual payment choices. Respondents are asked to record transactional details for every purchase they make over the course of three days, including the payment method they use, the purchase amount, the type of good and why they choose to pay the way they do. The DSI also asks respondents to record any cash withdrawals they make, as well as the amount of cash they have on them at the beginning and end of the diary.

### B.2.2 Update in 2013

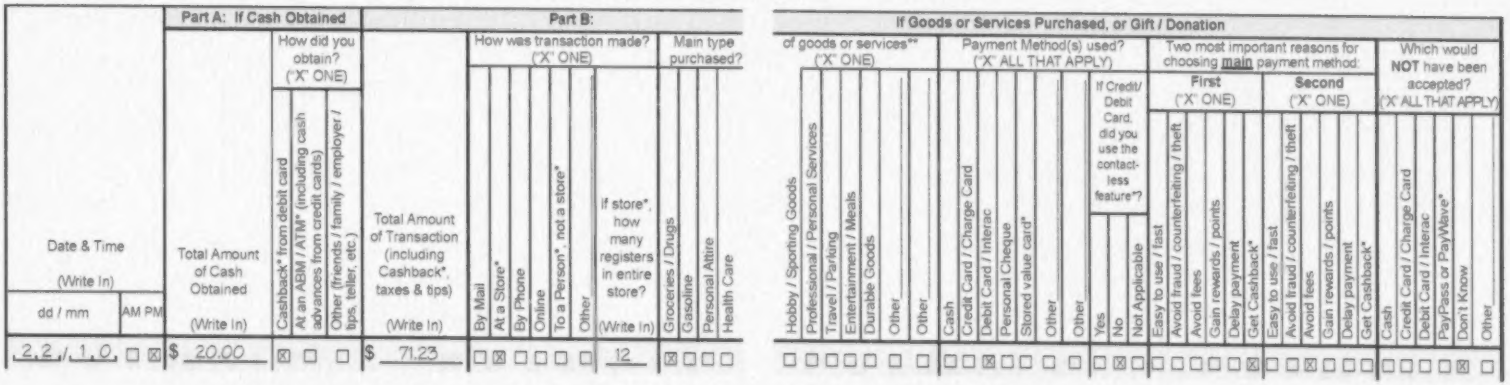
Although portions of the content and layout from the 2009 MOP were kept consistent for 2013, it was important to identify areas where the instruments could be improved upon. An emphasis on improving data quality meant an inevitable trade-off in terms of being able to directly compare all aspects of the SQ and DSI across years. However, certain questions in the SQ were kept consistent so that such a comparison is possible. Further, although the layout is updated in 2013, all key components of the DSI were kept consistent with respect to purchase/withdrawal details and cash balances. More in-depth analysis to carefully compare results from the 2009 and 2013 MOP surveys is currently under way. See Chen, Shen and Stuber (2014).

**Cash management.** The most important lesson learned from the 2009 MOP had to do with collecting data on cash management and withdrawals. In particular, respondents completing a paper-based DSI in 2009 were asked to record withdrawals and purchases on the same line (see Figure B.1(a)). If they made a withdrawal from an ABM (for example), only the first portion of the line was completed, whereas the second portion of the line was used for recording purchases. The respondent would be required to fill in the entire line only for a cashback transaction on a debit card.

We found that this layout had an adverse effect on the quality of the DSI as measured by the cash identity. The cash identity error was twice as large on average for those who recorded at least one withdrawal in the 2009 DSI. Further analysis, as well as feedback from respondents and the survey company, indicated that grouping purchases and withdrawals into a single "transaction" category was confusing. In addition, the definition of a cash transaction in 2009 was limited; people often manage their cash in ways other than for making purchases or withdrawals.

Figure B.1: Comparison of layout in 2009 and 2013 MOP DSIs

(a) Example of a record from the 2009 MOP DSI



| Date & Time (Write In) dd / mm | AM PM | Part A: If Cash Obtained — Total Amount of Cash Obtained (Write In) | How did you obtain? ("X" ONE) Cashback* from debit card | At an ABM / ATM* (including cash advances from credit cards) | Other (friends / family / employer / tips, teller, etc.) | Part B: Total Amount of Transaction (including Cashback*, taxes & tips) (Write In) | How was transaction made? ("X" ONE) By Mail | At a Store* | By Phone | Online | To a Person*, not a store* | Other | If store*, how many registers in entire store? (Write In) | Main type purchased? Groceries / Drugs | Gasoline | Personal Attire | Health Care |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2,2,/1,0, | ☐ ☒ | $ 20.00 | ☒ | ☐ | ☐ | $ 71.23 | ☐ | ☒ | ☐ | ☐ | ☐ | ☐ | 12 | ☒ | ☐ | ☐ | ☐ |

| If Goods or Services Purchased, or Gift / Donation — of goods or services** ("X" ONE) Hobby / Sporting Goods | Professional / Personal Services | Travel / Parking | Entertainment / Meals | Durable Goods | Other ____ | Other ____ | Payment Method(s) used? ("X" ALL THAT APPLY) Cash | Credit Card / Charge Card | Debit Card / Interac | Personal Cheque | Stored value card* | Other ____ | Other ____ | If Credit/Debit Card, did you use the contact-less feature*? Yes | No | Not Applicable | Two most important reasons for choosing main payment method: First ("X" ONE) Easy to use / fast | Avoid fraud / counterfeiting / theft | Avoid fees | Gain rewards / points | Delay payment | Get Cashback* | Second ("X" ONE) Easy to use / fast | Avoid fraud / counterfeiting / theft | Avoid fees | Gain rewards / points | Delay payment | Get Cashback* | Which would NOT have been accepted? ("X" ALL THAT APPLY) Cash | Credit Card / Charge Card | Debit Card / Interac | PayPass or PayWave* | Don't Know | Other ____ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☒ | ☐ | ☐ | ☐ | ☐ | ☐ | ☒ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☒ | ☐ | ☐ | ☐ | ☐ | ☐ | ☒ | ☐ | ☐ | ☐ | ☐ | ☒ | ☐ |

(b) Layout of a purchase record from the 2013 MOP DSI

**DAY 1 - PURCHASES**

| Time | Method | Tap-and-Go | Type | Reason | Location | Amount |
|---|---|---|---|---|---|---|
| AM ☐ | Cash ☐ | | | | | |
| | Debit card ☐ | | | | | |
| | Credit card ☐ | ☐ | T___ | R___ | L___ | |
| PM ☐ | Other (*USE CODE-LIST*)... ☐ | | | | | $_____ |
| | P___ | | | | | |

| Name of Store: | # cash registers / payment terminals: 0-4 ☐ 5-9 ☐ 10+ ☐ | Store only accepted cash? Yes ☐ No ☐ |
|---|---|---|
| | | |

(c) Layout of a withdrawal record from the 2013 MOP DSI

**WITHDRAWALS**

| Time | Source | | Reason | |
|---|---|---|---|---|
| AM ☐ | ABM | ☐ | Cash supply too low | ☐ |
| | Bank teller | ☐ | Convenience/passing by an ABM | ☐ |
| PM ☐ | Cash-back by debit card | ☐ | Planning to make a cash purchase/transfer | ☐ |
| | Cash advance by credit card | ☐ | Other (*PLEASE SPECIFY*) | ☐ |
| | **Paid a fee?:** | ☐ | _____ | |

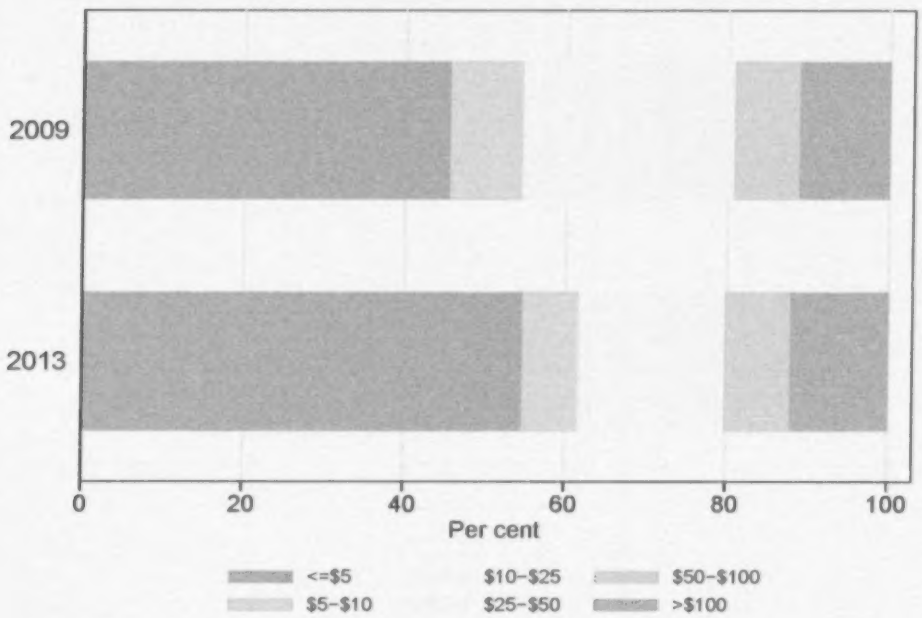
**Amount of Withdrawal:** $_____

Note: The sample record in (a) is from the 2009 MOP DSI and shows a transaction record that combines both purchases with cashbacks. The purchase and withdrawal layouts shown in (b) and (c) are separated in the 2013 MOP DSI.

The layout of the 2013 DSI was therefore altered to separate purchases and withdrawals (see Figure B.1(b) and Figure B.1(c)). In addition, to more accurately track cash management and improve the cash identity error, questions were added to better understand how cash is used in ways other than making purchases at the point of sale (POS). For example, people sometimes withdraw cash and put it away at home for emergencies or as a form of budget control. Alternatively, people may be paid in cash by their employer, representing a source of cash income other than a traditional bank/ABM/cashback withdrawal. Both the SQ and DSI incorporate these and other elements to better demonstrate how Canadians manage their cash.

Figure B.2 shows the improvement in measuring cash between the 2009 and 2013 MOP surveys. The coloured portions represent the percentage of respondents whose cash identity error fell within a certain range. In 2009, 45% of respondents had an error in their cash identity that was $5 or less, indicating that we were able to track their cash fairly accurately. This proportion increased by almost 10% in 2013 to 54%, signifying a noticeable improvement in data quality.

Figure B.2: Improvements in measuring cash: cash identity errors




Note: Errors could theoretically be positive or negative; this graph shows the absolute value of the cash identity error.

**Payment innovations.** The other important aspect of the survey instruments requiring updating was the level of detail concerning alternative methods of payment to cash, debit and credit. In 2009, both the SQ and DSI incorporated questions about contactless credit cards and stored-value cards. Research using this data conducted by the Bank of Canada has shown that these payment innovations are important for understanding the use of cash by Canadians. For

example, Fung, Huynh and Sabetti (2012) show that the use of contactless credit cards and stored-value cards leads to a decrease in cash spending, both in terms of the number and value of cash transactions. One potential explanation for this fact is that these payment methods compete with the speed and convenience of cash, while offering other benefits, such as rewards programs for credit cards (see Arango, Huynh and Sabetti (2011)).

These findings illustrated the need to collect more detailed information on a range of alternative payment methods and also exposed some limitations of the 2009 instruments. For example, in 2009, the category of stored-value cards included prepaid multi-purpose cards issued by Visa, MasterCard and American Express and store-branded gift cards that can only be used at the store/chain from which they were issued. Also, although the 2009 SQ asked whether the respondent had a contactless payment feature on their main credit card, there was no measure of active adoption; i.e., they may have the feature on their card, but never actually use it for a transaction. Finally, an important component of the 2009 SQ was the questions on perceptions of various payment methods; however, these questions addressed only cash, debit cards, credit cards and stored-value cards, not contactless credit cards or other payment innovations.

For the 2013 MOP, questions on alternative methods of payment to cash, debit and credit are extensively integrated into both the SQ and DSI. These include questions on relatively newer payment innovations such as contactless credit/debit cards, mobile payment applications and stored-value cards, as well as on methods used primarily for online payments such as Interac Online or PayPal. Special focus is given to stored-value cards, which are disaggregated into two categories to distinguish between multi-purpose cards issued by Visa, MasterCard or American Express and single-purpose, store-branded cards.

In the SQ, the focus of questions concerning alternative methods of payment is to identify who is adopting them, and to gauge consumer perceptions. In the DSI, a code list is introduced so that respondents can choose these alternative methods when stating how they pay for a transaction. A prominent check box is provided for respondents to indicate when they use the contactless feature to make a purchase. Finally, we ask how many credit/debit cards that respondents are carrying on them have a contactless feature.

# C Data Collection

This section describes the process of recruiting respondents for the 2013 MOP Survey, and ensuring that the sample is representative of the Canadian population.

## C.1 Recruitment and sampling

An innovation in the 2013 MOP Survey is to explicitly test the effectiveness of incentives offered to recruit potential respondents. Each respondent has a chance to receive one of eight possible incentive schemes, which differ based on the level and type of incentive. Incentives range from $5 to $20; different types of incentives include an advanced letter from the Governor of the Bank of Canada requesting participation and a token $2 coin included in the survey package distributed to potential respondents. Randomly assigning the incentive schemes enables us to test which incentives (and combinations thereof) are most effective at recruiting

survey participants. See Shen and Vincent (2014) for further details.

The overall sampling strategy in the 2013 MOP is similar to that of the 2009 survey. Sample targets are constructed with respect to region, gender and age, and are based on the 2011 National Household Survey conducted by Statistics Canada. Recruitment for the survey comes from two proprietary access panels maintained by Ipsos Reid: an offline panel accessible via regular mail and an online panel accessible via email. Stratified random sampling is used to select the list of potential respondents. Invitations were sent out starting at the end of October, and the final data set consists of responses collected between 28 October and 12 December 2013.

In the 2013 MOP, a specific subset of the offline panel, consisting of respondents who had recently filled out the Canadian Financial Monitor (CFM) survey, is also used for recruitment. The CFM is a nationally representative wealth survey of Canadian households that is also conducted by Ipsos Reid. One of the research goals of the 2013 MOP Survey is to test the likelihood of obtaining a representative sample from only past CFM respondents. If successful, this sampling approach could allow for more timely and cost-effective data on payments through integration of the MOP and CFM surveys. For details on the outcome of this approach and the representativeness of the CFM subsample, see Chen and Shen (2015).

## C.2 Final sample

We conducted extensive analysis to create sample weights for the 2013 MOP; the technical report by Vincent (2015) provides a full description of the weighting process. Weights ensure that the final sample is representative of the target population, and help correct for coverage and non-response bias. For the 2013 MOP, the target population is Canadians aged 18+, and counts of the population level are obtained from the 2012 Canadian Internet Use Survey (CIUS) conducted by Statistics Canada. The CIUS is demographically representative and provides important technological variables related to payments, such as the proportion of Canadians who have completed an online purchase in the past year. Determining the appropriate set of variables to use for calibrating the sample weights in the 2013 MOP is one of the major challenges of the weighting process, and is discussed in detail in the technical report. The final sample is calibrated using the following variables: age, education, marital status, region, gender, income, home ownership, online shopping and mobile phone ownership. See Table C.1 for the sample composition by age, gender and income category before and after weighting.

Table C.1: Effect of weights on sample composition in 2013 MOP

| | **Unweighted** | **Weighted** | **CIUS** |
|---|---|---|---|
| | | *proportion* | |
| AGE | | | |
| 18-34 | 0.253 | 0.289 | 0.314 |
| 35-54 | 0.387 | 0.362 | 0.351 |
| 55+ | 0.361 | 0.348 | 0.335 |
| GENDER | | | |
| Male | 0.477 | 0.489 | 0.492 |
| Female | 0.523 | 0.511 | 0.507 |
| INCOME | | | |
| Less than $45K | 0.411 | 0.333 | 0.310 |
| $45K-85K | 0.368 | 0.350 | 0.329 |
| $85K or more | 0.221 | 0.317 | 0.360 |

Note: Proportions in the *Unweighted* and *Weighted* columns relate to observations from the 2013 MOP SQ. The *CIUS* column shows proportions from the 2012 Canadian Internet Use Survey, which was used to construct the weights.

The final sample size and other statistics related to the survey can be found in Table C.2.

Table C.2: Summary statistics from the 2013 MOP

| | | **Overall** | **Paper based** | | **Online** |
|---|---|---|---|---|---|
| | | | *CFM* | *Offline* | |
| SQ | Number of respondents | 3,663 | 1,372 | 728 | 1,563 |
| | Response rate | 0.073 | 0.550 | 0.261 | 0.035 |
| | Survey satisfaction | 0.916 | 0.914 | 0.909 | 0.922 |
| | Median completion time | 23.0 | 20.0 | 27.0 | - |
| DSI | Number of respondents | 2,596 | 1,371 | 726 | 499 |
| | Number of purchases | 13,196 | 7,254 | 4,034 | 1,905 |
| | Number of withdrawals | 1,078 | 596 | 334 | 148 |
| | Survey satisfaction | 0.904 | 0.890 | 0.903 | 0.942 |

Note: Online response rates are typically low; offline response rates are typically around 20% for similar surveys conducted by Ipsos Reid. Survey satisfaction is based on the question "Would you be willing to fill out the SQ/DSI again in the future?" Respondents in the CFM subsample have a lower median completion time because they received a shorter survey, with responses to the omitted questions imputed from their CFM responses. The total number of DSIs collected is 2,599, but three were dropped because of poor quality.

In total, we collected 3,663 SQs and 2,599 DSIs; more SQs were collected because some

online participants completed the first instrument but did not go on to complete the three-day diary. Inviting past CFM participants has proven to be a successful recruitment strategy, since their response rate was over 50% and twice as high as that from the offline panel. The DSI contains a total of roughly 13,000 purchases and over 1,000 cash withdrawals. Participants show a high level of satisfaction with the survey, with 90% reporting that they would be happy to fill it out again in the future.

# D Data Quality

As in most surveys, the raw data contain some extreme, inconsistent and missing values. Collaboration with Ipsos Reid and analysis of the cash identity were key to addressing issues of data quality. This collaboration includes measures to detect issues during data collection and editing of the raw data.

## D.1 Survey completeness

Prior to data collection, we established standards regarding what constitutes a complete SQ and DSI. For the SQ, respondents are required to fill in certain key questions regarding cash, the details of their main bank account and credit card, and their demographics. For the DSI, the criteria are based on the level of error in the cash identity. Follow-up phone calls were made to respondents in the offline panel who did not meet these standards of quality, and they did not receive an incentive if they were unable to fill in key missing data. In the online version of the survey, many checks are built into the questionnaire to ensure that missing and inconsistent data are avoided.

In 2013, an additional check was implemented in the online DSI with respect to the cash identity. Respondents whose level of error was sufficiently high were presented with the calculation showing their cash at the start of the diary, the amount of cash they obtained/spent, and the amount of cash they reported having at the end. Follow-up questions asked the respondent why they thought their cash identity did not add up, and both open- and closed-ended questions were used in an attempt to correct the error.

## D.2 Error detection/editing

Once the data were collected, editing of the raw data was undertaken in collaboration with Ipsos Reid. The main tools of data editing were the cash identity and verbatim files. Improving the cash identity error was a general editing rule that was applied to various cases. For example, a respondent may withdraw $100.00 in cash but omit a decimal when recording that withdrawal, so that it becomes $10000. If replacing that value with $100.00 reduces or corrects the error in the cash identity, then the edit is made.

Verbatim files contain word-for-word responses written by respondents and come in several forms. The most important verbatim file contains the store name associated with each purchase. For approximately 90% of all transactions, the respondent recorded some information about the store/vendor where the purchase was made. This provided valuable context for the data, which helped us make reasonable edits. For example, we observe one purchase of

over $25,000, which is a potential case for edit because it is such an extreme value. However, we also observe that the store name is a car dealership, implying that the respondent purchased a vehicle. This context means that the extreme value makes sense and we do not edit this observation. Other verbatim files include stated reasons for making a cash withdrawal, methods of spending/receiving cash other than purchases/withdrawals, and general feedback on the survey.

Applying the tools of cash identity and verbatim files, these edits improved the cash identity for roughly 2% of all respondents, indicating the low level of editing that was required overall. The following aspects of the data were investigated for potential edits; final decisions on edits were made in consultation with Ipsos Reid:

1. **Extreme continuous values:** For dollar-amount variables—purchase amount, cash on hand, withdrawal amount, etc.—and other continuous variables, extreme values are present that can potentially influence estimates. We flag and investigate observations above the 98th percentile.

2. **Missing withdrawal channel:** Respondents were asked to state where they obtained their cash when they made a withdrawal, and this variable contained missing observations. Using the verbatim file where respondents recorded the reason for making a cash withdrawal, we found that many cases of missing data could be recoded to "other cash" activities.

3. **Inconsistencies in logic:** An example of an inconsistency in logic would be someone who recorded having no credit cards, but later in the SQ provided information on their main credit card, indicating that they actually have one. There were a small number of cases of such inconsistencies in the SQ and DSI, and these were handled on a case-by-case basis.

4. **Person-to-person transactions:** The store name verbatim file indicated that, for 35 purchases, the record is actually a person-to-person cash transaction. Using the cash identity, these cases were recoded to the variables for other cash use.

5. **Poor quality DSI:** For a small number of diaries (three), the cash identity was satisfied, but it was clear that the respondent did not fill out the diary in a serious way. These respondents were dropped from the final sample.

## D.3 Variance estimation

The final aspect of ensuring data quality is to obtain variance estimates, which tell us the level of certainty of sample statistics produced from the 2013 MOP that are presented in this paper. The technical report by Chen and Shen (2015) addresses this issue by providing a comparison of different approaches to calculating variance estimates. Ultimately, they recommend using *replicate weights* for the 2013 MOP, which are produced using bootstrap resampling methods. The benefit of replicate weights over other methods of variance estimation are twofold. First, replicate weights allow for variance calculations without revealing sensitive strata information, which protects the privacy of respondents. Second, this approach

incorporates the weighting procedure into the variance calculations, which provides more reliable estimates. For further details on replicate weights in the 2013 MOP, see Chen and Shen (2015).

# E Variable List

Table E.1: Definitions of payment instruments (MOP SQ)

| Concept | Definition |
|---|---|
| Cash | Coins and paper bills. |
| Debit card | Card issued by a bank that gives the holder electronic access to his or her bank account for making payments and for making withdrawals from an automated teller machine (ATM). |
| Credit card | Card allowing the holder to purchase goods and services on credit and pay the credit card company later. |
| Stored-value card issued by VISA /MasterCard/ American Express | Card that comes loaded with funds at the time of purchase and that features the Visa/Mastercard/American Express logo. It can be used to purchase goods and services, both in person and online. |
| Store-branded stored-value card | Card issued by a retailer that can be used only at stores belonging to the retailer. It can usually be reloaded with funds. E.g., Tim Horton's TimCard, Walmart gift card |
| Contactless (tap and go) | Feature found on some credit and debit cards. Allows user to pay by waving or tapping the card over a terminal without entering a PIN or swiping or inserting the card. E.g., MasterCard PayPass, Visa payWave, Interac Flash |
| Online payment account | Account not affiliated with any particular bank, but that can be loaded with funds and used to make purchases or transfer money on the Internet. It can be loaded using a credit card or by linking to a bank account. E.g., PayPal |
| Mobile payment application | Application on a smartphone, such as an iPhone, Blackberry or Android phone, that allows the user to make purchases. |
| Cheque | Document directing financial institutions to pay money from a bank account. |

Table E.2: Definitions of payment instrument attributes (MOP SQ)

| Concept | Definition |
|---|---|
| Ease | How easy or hard it is to use the method of payment in Canada. |
| Cost | How costly it is to use the method of payment in Canada, taking fees, interest payments, etc. into consideration. |
| Security | How risky or secure it is to use the method of payment in Canada, in the respondent's opinion. |
| Set-up | How easy or hard it is to get or set up the method of payment before being able to use it in Canada. |
| Acceptance | How widely accepted the method of payment is in Canada. |

Table E.3: Definitions of adoption of payment instruments (MOP SQ)

| Concept | Behaviour that defines adoption |
|---|---|
| Credit card adoption | Reports having access to one or more credit cards (having access means owning the card and being able to make a purchase with it tomorrow). |
| Debit card adoption | Reports having access to one or more debit cards or reports having a bank account. |
| Stored-value card issued by Visa/ MasterCard/ American Express adoption | Reports having access to one or more stored-value cards issued by Visa/MasterCard/American Express. |
| Store-branded stored-value card adoption | Reports having access to one or more store-branded stored-value cards. |
| Contactless (tap and go) adoption | Reports having made a purchase with a contactless debit or credit card in the past year. |

Table E.4: Definitions of cash-related variables (MOP SQ)

| Concept | Definition |
|---|---|
| Cash on hand | Amount of cash in the respondent's purse, wallet or pockets at the time of the survey. |
| Other cash holdings/ Cash in store | Amount of cash the respondent's household keeps in locations other than a purse, wallet or pockets, such as at home or in a vehicle. |

Table E.5: Definitions of transaction types (MOP DSI)

| Concept | Definition |
|---|---|
| Purchase | Buying something, paying for a service, or making a financial gift or donation. Does not include pre-authorized payments. |
| Person-to-person payment | A transaction between two private individuals. |
| Online payment | Payment made for a transaction over the Internet. |

Table E.6: Examples of types of goods and services purchased (MOP DSI)

| Type of purchase | Example |
|---|---|
| Groceries/ drugs | Food, alcohol, tobacco, cleaning products, prescriptions. |
| Personal attire | Clothing, accessories, cosmetics. |
| Health care | Doctor, dentist, hospital bills. |
| Hobby/ sporting goods | Craft supplies, toys, sports equipment, books, newspapers. |
| Professional services | Lawyer, mechanic, spa services, haircut. |
| Travel/ parking | Taxi, plane, train, hotel parking. |
| Entertainment/ meals | Movies, restaurants, outings. |
| Durable goods | Electronics, furniture, appliances, automobile, household accessories. |